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Soviet Consumption and Income Policies in Perspective
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Meeting in the Kremlin in early 1976 for the 25th Party Congress, the leadership of the Soviet Communist Party could look back with both pride and frustration on the fruits of its policies affecting the welfare of population over the preceding quarter century. The period (1950-1975) was one of relative peace and quiet, witnessing none of the upheavals of the preceding 25 years -- the advent of central planning, the collectivization of agriculture, the political purges, World War II with its catastrophic loss of life, property and production in the economy. Even with restored output by 1950, the population had benefitted little from the advent of socialism. Per capita consumption was not much above the level of 1928 or 1913, and the goods and services provided were primitive and inferior in mix and quality, even for a semi-developed country. The subsequent quarter century has brought great progress, particularly in quantitative terms. By 1975, the level of living of the Soviet people was more than double that of 1950 and had gained significantly relative to industrialized countries of the West. Qualitative gains were much less spectacular. But rapid quantitative progress has revealed, as well as helped to produce serious consumer-related problems, which seem to defy solution within a system of centrally-planned socialism.

This paper will consider: (1) the record of progress during 1950-1975, as measured by revised indexes of real per capita consumption of goods and services; (2) the concomitant changes in money incomes from work and in state welfare programs; (3) the problems arising from these consumption and income policies and the current difficulties in management of the consumer sector of the economy; (4) the inherent systemic dilemma and the policy options facing the political leadership.

I. Consumption -- the Record

The consumption indexes on which the following discussion is based are revisions of indexes given in the JEC volume Soviet Economic Prospects for the Seventies, published in 1973. The principal changes are: (1) use of 1970 base-year weights instead of 1968 weights (2) substitution of several quantity series for deflated retail sales (3) replacements of a small, unrepresentative, quantity sample of consumer durables with a broader series representing deflated retail sales for consumer durables and miscellaneous household goods. The net affect of these and lesser changes is to reduce the growth of total consumption by 0.4 percentage points per year during 1951-1971; the greatest impact was on consumer durables, where growth was reduced by 2.5 percentage points annually. The consumption index is a base-year weighted index of a number of individual

series for goods and services. The sample underlying the index is approximately 95 percent complete. Thus, quantity changes are represented quite completely, and quality change is accounted for to the extent possible with available and reliable data.

A. Overall

During the period 1951-75 -- the Fifth through the Ninth Five-Year Plans -- per capita consumption of all goods and services increased about 2.6 times, an average annual rate of 4 percent. The relevant data are presented in summary form in Table 1. Progress was uninterrupted but quite uneven, with the greatest gains being made during the 1950's. Following relatively low rates of growth during the early 1960's, the gains in per capita consumption accelerated in the late 1960's, only to be followed by another slowdown during the early 1970's. Poor agricultural performance was the main cause for the slowdown in consumption in both 1961-65 and 1971-75. The slowdown affected all categories of consumption except household services. In contrast to the pre-war years, consumption of goods and household services rose more rapidly than communal consumption (state-provided education and health). Despite such rapid progress, per capita consumption in the USSR is still only about one-third of that in the US and well behind that of Western Europe. The disparities are even greater, when

Table 1

USSR: Growth of Per Capita Consumption in the USSR
1950-1975

	Indexes 1950 = 100					
	1950	1955	1960	1965	1970	1975
Total consumption	100.0	129.3	159.2	180.5	226.8	264.9
Household	100.0	130.3	161.8	182.4	231.5	270.8
Goods	100.0	131.4	163.8	181.4	229.4	266.1
Food	100.0	125.6	144.3	159.1	189.4	210.0
Soft goods	100.0	142.6	212.8	232.7	320.5	367.0
Durables and miscellaneous	100.0	223.3	382.7	473.7	751.9	1196.2
Services	100.0	121.9	148.6	188.5	245.7	303.2
Communal	100.0	124.0	142.7	169.9	198.0	228.7
Education	100.0	115.6	125.2	160.9	188.2	222.4
Health	100.0	139.5	174.4	185.9	215.1	239.4

	Average Annual Rates of Growth					
	1951-75	1951-55	1956-60	1961-65	1966-70	1971-75
Total consumption	4.0	5.3	4.2	2.5	4.7	3.2
Household	4.1	5.4	4.4	2.4	4.9	3.2
Goods	4.0	5.6	4.5	2.1	4.8	3.0
Food	3.0	4.7	2.8	2.0	3.5	2.1
Soft goods	5.3	7.4	8.3	1.8	6.6	2.7
Durables and miscellaneous	10.4	17.4	11.4	4.4	9.7	9.7
Services	4.5	4.0	4.0	4.9	5.4	4.3
Communal	3.4	4.4	2.8	3.6	3.1	2.9
Education	3.2	2.9	1.6	5.1	3.2	3.4
Health	3.6	6.9	4.6	1.3	3.0	2.2

Source: Appendix 1, Table

allowance is made for the inferior quality and limited assortment of Soviet goods and services.

Evidently, the Soviet leadership is contemplating a relatively slow growth in per capita consumption over the next few years. The quantitative goals set in the Tenth Five-Year Plan (1976-80) imply growth at about the same rate as in 1971-75. In view of the tautness of this plan, poor harvests would jeopardize even this modest improvement in levels of living.

B. Food

Although it is the slowest-growing category, per capita food consumption has more than doubled in real terms during the past quarter century. Year-to-year gains have varied widely, depending on the size of the harvest. In addition to quantitative gains, the quality of the diet has improved markedly in a direction typical of developing countries -- more meat, milk and vegetables and less bread and potatoes. As shown by the data in Table 2, the average person ate over twice as much meat in 1975 as he did in 1950, when consumption of meat was even below what it was in 1913. Per capita/ consumption of fish and vegetable oil also doubled, while that of eggs, sugar and fruit more than tripled. In contrast, per capita consumption of potatoes was half what it was in 1950, and consumption of grain products has declined by one-sixth.

Even so, the average Soviet citizen still gets about half his daily calories from bread and potatoes and eats less than half as much meat as do his counterparts in the US and Western Europe. Moreover, in 1975, consumption of bread and potatoes still exceeded the "rational consumption norms" established by Soviet statisticians for long-range planning purposes by over one-fifth, and consumption of meat, milk and eggs was below these norms by over one-quarter.^{1/} Only for sugar and vegetable oil were the norms exceeded.

Influenced, perhaps, by the crop failure in 1975, Soviet planners have scheduled a growth in food consumption in 1976-80 at the low rates realized during 1961-65 and 1971-75. As a consequence of shortages of feed and distress slaughtering of animals, per capita consumption of meat output will probably decline in 1976, perhaps by as much as one-quarter. However, the plan emphasizes continued improvement in the quality of the diet over the 5-year period as a whole. Barring another series of crop disasters, the Soviet Union should be able to meet or even exceed the modest planned goals for food consumption, with the exception of meat.

Table 2

Per Capita Consumption of Major Foods
1950, 1960, 1970 and 1975

	Kilograms per year			
	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1975</u>
Meat and meat products, including fat	26	40	48	58
Milk and milk products	172	240	307	315
Eggs (units)	60	118	158	215
Fish and fish products	7.0	9.9	15.4	16.8
Sugar	11.6	28.0	38.8	40.8
Vegetable oil	2.7	5.3	6.8	7.9
Potatoes	241	143	130	120
Vegetables and legumes	51	70	83	87
Fruits and berries	11	22	35	37
Grain products	172	164	149	142

Sources: Narodnoye khozyaystvo SSSR, 1922-1972, p. 372.
SSSR v tsifrakh v 1975 godu, p. 202.

C. Soft Goods

Per capita consumption of soft goods expanded about four-fold during the past 25 years. Gains were nearly twice as great during the 1950's as during subsequent years. This group includes clothing, shoes, haberdashery, fabrics and a wide variety of other soft goods, ranging from soap to publications. Factory-made clothing has been rapidly displacing home-sewn garments, resulting in a slowing growth in consumption of fabrics and rapid growth in outlays on ready-made garments. The average person now buys three pairs of shoes per year, compared with only one pair in 1950, and the USSR has now met the "rational norm" established for consumption of this item. The quality, style, and variety of soft

goods have also improved markedly, even though they still appear shoddy and drab by Western standards. Imports of these goods in recent years have added quality to the wardrobe of consumers affluent enough to pay the high prices fixed for them or having the credentials to purchase them at low prices in special stores not accessible to the general populace.

The goals established for the textile and clothing industries in the Tenth Five-Year Plan imply a planned growth in per capita consumption of soft goods at the relatively low rate achieved during 1971-75. The plan emphasizes that a concerted effort is to be made to upgrade the level of quality, style, and fashion in clothing and shoes.

D. Durables and Miscellaneous Goods

In 1950, a consumer durable goods industry was almost non-existent in the USSR, and sales of durables and miscellaneous common household items represented only about 5 percent of total retail sales of non-food goods. A quarter century later the USSR had developed sizeable capacities to produce ordinary durables such as sewing machines, washing machines, refrigerators, furniture, radios and TV's, and had established belatedly a moderate-sized passenger car industry. Sales of such durables in 1975 comprised about one-fifth of total sales of non-food goods. Overall, consumption of durables and

miscellaneous goods increased 16-fold during 1951-75, an average annual growth of 10.4 percent. Although most Soviet consumer durables are of poor quality and obsolete design by modern standards, ordinary durables, nonetheless, are becoming a feature of most Soviet households. Indeed, some families now own two or more of some durables.^{2/} Automobiles are a striking exception, since only about 4 of every 100 families owned one in 1974 ^{3/} -- the consequence of the long delayed decision to produce cars for sale to the population in large quantities. Table 3 provides data showing the change in household stocks of major consumer durables over the past 15 years; data for 1950 are not available, but stocks must have been insignificant.

By far the largest gains in consumption of durables took place during the 1950's, when explosive growth occurred in production of washing machines, refrigerators, vacuum cleaners, and television sets from very low levels. Subsequently, growth in sales of such conventional durables slowed greatly, but after 1970 the number of automobiles sold at retail rose over 8-fold -- from 123,000 to 924,000; their sales probably approached 4 billion rubles in 1975. The Tenth Five-Year Plan provides for output of major consumer durables (other than cars) and miscellaneous household goods to increase at about the same rate as was achieved in 1971-75.

Judging from this evidence and the levelling off in the production of automobiles, it appears that per capita consumption of consumer durables will expand somewhat less rapidly in 1976-80 than in 1971-75. At the same time, the plan calls for continued upgrading of the quality and servicing for durables, shifts in mix toward more modern designs (e.g., self-defrosting refrigerators) and introduction of new products, such as air conditioners and video tape recorders.

Table 3

Household Stocks of Consumer Durables
1960, 1970 and 1975

(Units per 100 families)

	<u>1960</u>	<u>1970</u>	<u>1975</u>
Watches and clocks	286	346	457
Radios and phonographs	46	72	78
Television sets	8	51	74
Cameras	18	27	27
Bicycles, motor bikes and mopeds	39	50	54
Motorcycles and motorollers	4	7	8
Vacuum cleaners	3	12	19
Sewing machines	35	56	61
Refrigerators	4	32	62
Washing machines	4	52	65

Source: Narodnoye khozyaystvo SSSR, 1922-1972, p. 373.
SSSR v tsifrakh v 1975 godu, p. 204.

D. Housing and Personal Services

Per capita consumption of services tripled during 1951-75, and in contrast to all other major categories grew more rapidly in the 1960's and 1970's than in the 1950's.

This group consists of housing, utilities, personal transportation and communication, repair and personal care, and a variety of recreational and cultural services paid for by the population. Personal transport and communication services grew most rapidly over the period, expanding over five-fold. In contrast, the total housing stock rose by only 75 percent, reflecting an increase in per capita living space in urban areas from 4.7 square meters in 1950 to 8.1 square meters in 1975 and somewhat larger gains in rural areas. The majority of urban families now have their own apartments, a great gain over earlier years, when most urban families shared kitchen and bath facilities with several neighbors. All housing now has electricity, and the use of gas is growing rapidly. Despite these visible gains, Soviet housing remains crowded, drab, and monotonous and represents an area of great consumer frustration and relative neglect.^{4/} Among the remaining services, repair and personal care services increased scarcely at all on a per capita basis until about 1963-64, when the government launched a major program to expand state-run service facilities of all kinds. Nonetheless, expenditures on such state services were a mere 26 rubles per capita in 1975. By all accounts, their poor quality continues to remain the basis for a flourishing private sector.

According to the Directives for the Tenth Five-Year Plan, a continued rapid rate of expansion of the entire

services sector is planned, although evidently at much lower rates than in the preceding decades. If urban housing goals are met -- something never accomplished in the past -- per capita living space will still not have reached the minimum norm for health and decency established by the Soviet government in 1928. A slow-down in the growth of state-provided, repair and personal care service facilities also is in prospect, although their quality is supposed to improve.

E. Communal Services

Government outlays on education and health services more than tripled over the past quarter-century, representing a growth in real per capita expenditures of 3.4 percent annually. Such expenditures now account for about 7 percent of gross national product, a large share for a country at the Soviet level of development. The two sectors have expanded at similar rates, and both have experienced reduced growth rates since 1965, a result consistent with slowing population growth. In education, this substantial effort has resulted in an increase in the median number of years of schooling of persons aged 16 years and older from 5.0 years in 1950 to an estimated 7.7 years in 1975.^{5/} The goal of a universal, ten-year (high school) education is close to being realized. The large-scale investment in higher education is evidenced by the fact that 84 out of

every 1,000 persons working in 1975 had completed college, and an additional 667 had some college or secondary specialized education; in 1959, the corresponding figures were 33 and 400.^{6/}

In health, the Soviet effort is reflected in reductions in general and infant mortality rates to levels that compare favorably with those of Western industrialized countries. According to Soviet statistics, the number of doctors per 10,000 population rose from 14.6 in 1950 to 32.6 in 1975, and the number of hospital beds per 10,000 population rose from 56 to 118 during the same period.^{7/} By all accounts, the quality of health care varies greatly among regions^{and} is far better in cities than in rural areas and for elite groups than for the general population. Although the quality of both personnel and facilities may be poor by Western standards, the USSR has developed a generally adequate public health system available to everyone without direct charge. The costs of such an extensive system have been kept low mainly by fixing low wages for health service personnel.

The Directives for the Tenth Five-Year Plan outline the planned achievements in education and health during 1976-80. Educational advance apparently is planned to proceed about at rates of the recent past, with much emphasis to be placed on vocational training and upgrading of skills. In health, the quality of service is to be improved, and the number of

hospital beds is to increase by about 10 percent, compared with about 25 percent during 1971-75.

II. Personal Incomes

Along with rapid growth in quantities of goods and services consumed, the past quarter century has brought remarkable changes in the growth and structure of personal incomes. First of all, money incomes have increased steadily and rapidly. Table 4 and Appendix B present the available data on disposable money incomes. In considering these data, it should be noted that they understate total current money incomes by several percent annually,^{8/} because of the absence of data on such incomes as prisoners' wages, various kinds of money payments not included in the regular wage fund, receipts from sale of property and from private non-agricultural activities, and others. Per capita reported money incomes quadrupled during 1950-1975, rising somewhat more rapidly than per capita retail trade and household services (3.7 times). Incomes grew more rapidly during the 1960's (6.5 percent annually) than during the 1950's (5.2 percent annually). A cutback in growth to 4.9 percent annually was registered in 1971-75.

To the extent that one can judge from the incomplete data, both for incomes and for outlays, shown in Table 4, the Soviets have had an uneven record of performance in their efforts to

Table 4
Growth of Money Incomes and Outlays per Capita,
1950-1975

	Disposable Money Incomes <u>a/</u> (in rubles)	Money Outlays on Goods and Services <u>b/</u> (in rubles)	Money Outlays on Goods and Services and Savings <u>c/</u> (in rubles)
1950	220.5	226.2	227.7
1955	282.8	287.5	290.2
1960	366.1	406.3	410.2
1965	492.9	499.1	512.2
1970	685.1	696.3	730.0
1975	871.6	842.1	889.6

Average annual rates of growth

1951-55	5.1	4.9	4.9
1956-60	5.3	7.1	7.1
1961-65	6.1	4.2	4.4
1966-70	6.8	7.0	7.3
1971-75	4.9	3.9	4.0

a. Taken from Appendix B, Tables 1-3.

b. Soviet-reported retail trade (less estimated sales to institutions), and outlays on household services included in the index for services described in Appendix A. It is assumed, as Soviet sources claim, that price changes for services were negligible. The population's outlays on education and health are not included, because they cannot be estimated accurately over time. They are small, in any case. Only expenditures in legal markets are included.

c. Retail sales to the population plus the increment in the population's deposits in savings banks as reported in Soviet statistical handbooks.

match the growth of money incomes with equivalent growth in the supply of goods and services. The most successful periods seem to be 1951-55 and 1966-70. The record for 1956-60 and 1961-65 is greatly affected by events in 1960, when an unusually large increase in retail trade occurred, probably because people feared that the currency devaluation announced for 1961 would be confiscatory. Evidently, there was dis-hoarding of cash in that year. For the decade 1956-65, reported money incomes and purchases of goods and services grew at about the same rate. Rising incomes, along with failure to match their growth with desired goods and services and severely limited access to consumer credit, has resulted in growth of per capita deposits in savings banks from a mere 10.3 rubles in 1950 to 357.4 rubles in 1975. Additional savings have taken the form of purchases of private and cooperative housing and purchases of state bonds, but these are small compared with savings deposits, at least since 1955, when compulsory purchase of state bonds was discontinued.

The rise in money incomes has been spread quite unevenly among major groups of the population. Non-agricultural workers experienced a growth in average annual money earnings of 3.1 percent annually. Average wages increased nearly twice as fast during the 1960s as during the 1950s. In the latter period the growth in earnings reflected mainly a wage creep resulting from rising productivity and level of skill and education of the labor force. Also, in this period the

work-week was reduced by one-sixth, a major wage reform was carried out in the industrial sector, and the minimum wage was raised substantially. In the 1960's, the minimum wage was again raised -- from 20-30 rubles per month to 40 rubles and then to 60 rubles per month. The wage reform along with large increases in wage levels was extended to the long-neglected service sectors. During the latter half of the decade, average wages were raised significantly as a result of increased bonuses paid from profit-based incentive funds established by the general economic reform launched by Kosygin in late 1965. The acceleration in the growth of money earnings, along with an even greater increase in the level of savings deposits, led to a policy of severely restricting the expenditure of incentive funds in 1971-75. Another round of wage reforms was launched and reportedly completed in the so-called "productive" sectors; it involved an increase in the minimum wage to 70 rubles per month, establishment of new wage scales and tightening of work norms, and increases in regional and other such pay differentials. Substantial wage increases were also made for major groups of workers in education and health.

Throughout the entire period, money wages of agricultural workers increased over twice as fast as wages of non-agricultural workers. In part, this spectacular growth

reflects the monetization of the collective farm sector.

In 1953, only about 40 percent of total wages paid to collective farmers by the farms was paid in cash; the rest was paid in kind. By 1973, nearly all wages were paid in money.^{9/}

As a result of this change, the large rise in agricultural procurement prices, and a deliberate policy of gradually raising collective farm wage rates to the level of state farms, money wages of collective farmers increased at an average annual rate of 13.6 percent during 1951-75. At the same time, wages in state agriculture were raised more rapidly (4.9 percent annually) than wages of all other state employees (3.1 percent annually). The growth of average money wages for both groups combined was more rapid during the 1950's than during the 1960's, with a pronounced slowdown occurring in 1971-75. The data for the several groups of workers in the labor force are shown in Table 5.

The increase in total agricultural incomes, however, was much less rapid than indicated by changes in wages alone. Agricultural families obtain a substantial share of their total real incomes from consumption-in-kind and from sale of products from their own private farming activity (private plots). These sources are a much larger share of the total incomes of collective farmers than of state farm workers. When net household incomes from sale of farm products are added to farm

Table 5

Average Annual Money Wages of Agricultural
and Non-Agricultural Workers,
1950-1975
(in rubles)

	Non-Agricultural Workers <u>a/</u>	All Agricultural Workers <u>b/</u>	State Agricultural Workers <u>c/</u>	Collective Farmers <u>d/</u>
1950	830.1	89.57	459.6	42.8
1955	927.8	208.81	559.2	123.4
1960	1,008.4	330.90	645.6	221.5
1965	1,190.5	614.40	900.0	483.1
1970	1,490.8	961.42	1,212.0	825.9
1975	1,780.7	1,225.79	1,528.8	1,027.8

Average Annual Rates of Growth

1951-55	2.2	18.5	4.0	23.6
1956-60	1.7	9.7	2.9	12.4
1961-65	3.4	13.2	6.8	16.9
1966-70	4.6	9.4	6.1	11.3
1971-75	3.6	5.0	4.7	4.5

a. Total wage bill for all state employees less the wage bill for state agriculture. Employment and average wages are reported in the annual statistical handbooks.

b. Average annual wages of workers in state and collective farm agriculture weighted by their respective employment.

c. Average wages are reported in the annual statistical handbooks and for 1975 in SSSR vtsifrakh v 1975 godu, p. 180.

d. Average wages are calculated by dividing total wage payments to collective farm members given in Appendix B, Table 2 by average annual employment estimated by Murray Feshbach and Stephen Rapawy, "Labor Constraints in the Five-Year Plan," in Joint Economic Committee, Soviet Economic Prospects for the Seventies, Washington, 1973, pp. 520-521.

wages and the farm labor force adjusted to include employment in private agricultural activities, the growth of average money incomes during 1951-75 is reduced to 8.1 percent annually, over twice as fast as average money incomes of non-farm workers. With respect to consumption-in-kind, the evidence points unmistakably to a steady decline in its share in total farm household incomes. One Soviet source reports that in-kind incomes (including in-kind payments from collective farms) comprised 15 percent of the total personal consumption fund in 1950, 12 percent in 1960 and about 8 percent in 1973.^{10/} From this information, coupled with available data on farm and non-farm money incomes, it can be estimated that average farm incomes were 41 percent of non-farm incomes in 1950, 64 percent in 1960 and 86 percent in 1973. These are surely maximum ratios, since they attribute all consumption-in-kind and money earnings from the sale of farm products to farm households, whereas urban households obtain small incomes from these sources also. Another calculation based mainly on family budget data in Soviet statistical handbooks produced an estimate that average annual farm incomes were 57.4 percent of non-farm incomes in 1960 and 74 percent in 1970.^{11/} Whatever the "true" figures may be, the term "revolution" is certainly appropriate to describe the large rise in farm incomes over the past 25 years, both absolutely and relative to non-farm incomes.^{12/}

According to the Directives for the Tenth Five-Year Plan, the growth of money incomes is to continue, but at slower rates than during the Ninth Five-Year Plan. Wages of the state labor force (agricultural and non-agricultural) are scheduled to rise 16-18 percent, and wages of collective farmers are to rise by 25-27 percent. Thus, the trend toward narrowing of income differentials between farm and non-farm workers will continue. The minimum wage of 70 rubles per month, along with related changes in wage and salary rates, is to be completed in the service sectors, and a new round of increases in the minimum wage is to be started.

Another major development affecting the level of personal incomes is the rapid rise in transfer payments, which increased over 6 times during the past 25 years. These payments consist mainly of state pensions, various kinds of welfare benefits and stipends for students. In 1950, pension and welfare payments amounted to a mere 19 rubles per capita; in 1975 they amounted to 123 rubles. Their growth has been far more rapid than the growth in wages, reflecting not only gradual aging of the population and increasing wages (to which pensions are tied), but also large increases in minimum pensions^{and} liberalization of other welfare programs. In the mid-1950's, a major reform raised pensions and disability benefits, liberalized eligibility requirements, and set minimum pensions of 20-30 rubles per month. During the 1960's, a formal system of

pensions for collective farmers was established, patterned after the system for state employees and partially financed by the state budget. During 1971-75, pensions and benefits for various categories of workers were further increased, eligibility rules for collective farmer pensions were liberalized, and (in 1974) a system of family allowances for low income families was introduced. In 1972, stipends for students were increased by 25 percent. The Tenth Five-Year Plan provides for further improvement in pension and welfare programs, including increases in minimum pensions, for both state workers and collective farmers. Apparently, no major program changes are planned, however, since the funds to be allocated to such programs and to education and health are scheduled to ^{rise} much less in 1976-80 (28-30 percent) than in 1971-75 (41 percent).

Up to now, the discussion has concerned money incomes alone. Consideration of real incomes requires a price index that measures changes in the cost of living with reasonable accuracy. The index used in previous JEC studies to express per capita disposable money income in real terms is a combination of the official Soviet index of state retail prices and an index of prices on collective farm markets derived from official data. These indexes have been severely faulted by both Soviet and Western economists, because they do not really measure changes in prices of goods actually sold. ^{13/} The official retail price index, by virtue of the method of construction, is an index of prices on state price lists, rather than an index of prices actually paid. The index is widely believed to understate real price changes, especially in recent years. Lack of data precludes independent construction of a substitute price index from sample price and quantity data.

To provide an alternative to the official index and to give some idea of what actual price changes might have been, an "alternative" index was calculated; it is the price index that is implicit in a comparison of indexes of goods sold in the retail trade network in constant and in current prices. More specifically,

an index of consumption of purchased goods in constant prices was derived from the index of consumption of goods shown in Appendix A, Table 1 by deducting consumption in kind in constant prices from the index for food and then combining the resulting index for food with the indexes of soft goods and durables. The index in current prices is derived from total retail and collective farm market sales regularly reported in Soviet statistical handbooks. The implicit price index resulting from comparison of these two indexes is shown for benchmark years in Table 6. A more complete explanation of the methodology is given in Appendix B. The two indexes behave rather differently; whereas the official index is nearly flat after 1955, the "alternative" index rises steadily but at a slow average annual rate of 1.3 percent.

The "alternative" price index has shortcomings in that: (1) its coverage, although very close, is not identical with the coverage of officially reported retail sales; (2) it is derived from a sample index, even though coverage is nearly complete; (3) it includes several component indexes which are themselves based on retail sales deflated by the official price indexes. Nonetheless, the "alternative" index is believed to be a more accurate measure of real price changes of goods

actually purchased than is the official index. If anything, it understates the increase in prices. Its movement accords with the mass of anecdotal evidence that points to a downward bias in the official retail price index. Neither index, of course, takes account of the price increases that result from such phenomena as disappearance from the market of low-priced types of a given product and their replacement with higher-priced goods without a commensurate increase in quality. 14/

Table 6

Growth of Real Per Capita Disposable Income Using Alternative Consumer Price Index, 1950-1975

	Per Capita Personal Disposable Money Income (rubles)	Official (A)	"Alternative" (B)	Real Per Capita Disposable Money Income (rubles)	
				A	B
1950	220.49	100.0	100.0	220.49	220.49
1955	282.77	74.7	83.4	378.54	339.05
1960	366.08	75.1	87.2	419.82	420.30
1965	492.90	75.8	93.4	527.73	527.73
1970	685.13	75.4	99.6	908.66	687.88
1975	971.56	75.8	108.0	1,149.82	807.00

Average Annual Rates of Growth

1951-55	5.1	11.4	9.0
1956-60	5.3	5.2	4.3
1961-65	6.1	6.0	4.7
1966-70	6.8	7.0	5.4
1971-75	4.9	4.8	3.2
1951-75	5.7	6.8	5.3

As shown in Table 6, real per capita disposable money incomes grow quite a bit more slowly, when the "alternative" consumer price index is used as a deflator than they do when the official retail price index is used. During the entire period 1961-1975, the former shows a less than 4-fold growth, compared with more than a 5-fold growth shown by the latter index. The former increases more slowly than the latter in all periods, with the differences being greater in more recent years. The index of real per capita incomes using the "alternative" deflator is also more consistent with the independently-constructed index of real per capita household consumption shown in Table 1. The former still increases more rapidly for various reasons, the principal ones being the rapid monetization of the agricultural sector that occurred during the first two decades, and the rapid growth of per capita savings deposits. The consumption index, of course, takes account of the fact that consumption-in-kind, while still a sizeable share of peasant incomes, increased scarcely at all by quantitative measures.

III. Some Consequences of Soviet Consumption and Income Policies

Since the early 1950s, Soviet policies in the area of consumption and personal incomes have reflected a large-scale effort to redress in part the gross imbalance

in the economy, which was Stalin's legacy. At the same time, the leadership strove to do so with a bare minimum of change in Stalinist arrangements for production and distribution of goods and services. Rapid growth in quantities of basic goods and services, along with essentially unchanged institutional arrangements over the past quarter century has produced a number of serious problems in the management of the consumer sector. The problems may be grouped in two categories: (1) those relating to provision of the mix and quality of goods and services that people want, when and where they are wanted, and (2) those relating to the presence of a large overhang of liquid assets in the hands of the population. The two groups of problems are related, as are the constraints on their solution imposed by current dogma and institutions.

A. Problems of Quality and Mix

By about 1960, the needs of the population for basic goods had essentially been met. People had enough to eat, and the quality of the diet had steadily improved; they also had minimum stocks of clothing and shoes and a few common durables. With basic physical needs satisfied and with rising incomes, the general seller's market long characteristic of the Soviet consumer sector came to an abrupt end. People began to buy selectively; they

rejected goods of obsolete design and shoddy quality. The problem of unsaleable goods appeared first in the area of soft goods. For example, between the end of 1960 and the end of 1965, retail inventories of cloth expressed in days of turnover rose from 138 to 237; the corresponding figures for 108 and 130 for clothing and underwear, and 71 and 109 for knitwear. 15/ The build-up in stocks did not occur for durables, except in the notable case of sewing machines, for which stocks rose from 45 days to 227 days. By dint of price cuts, exports, and reallocation of stocks during 1965-70, the Soviets managed to reduce these inventories substantially. Since 1970, the problem has again become evident, now affecting selectively both soft goods and durables. Thus, between 1970 and 1974, stocks of knitwear rose from 104 to 138 in days of turnover; wool cloth from 92 to 149, leather and synthetic shoes from 79 to 144; metal dishware from 137 to 195; electrical appliances from 103 to 141. 16/ Judging from complaints voiced in the press in 1975-76, the problem of above-norm inventory accumulations continues to persist. The current situation, unlike that in the early 1960s, does not involve an overall buildup of inventories relative to sales, but rather a selective build-up in stocks of particular goods.

In recent years, the Soviets have attempted to cope with inventory pileups of slow-moving goods by conducting nationwide sales at greatly reduced prices and covering the resulting losses for retail stores with budget subsidies. There is much lament in the press over the high cost of these sales and their only partial success. According to a special survey, slow-moving and unpopular goods whose prices had to be cut by 50 percent or more in order to sell amounted to 3.8 billion rubles as of March 1, 1972, and 4.2 billion rubles as of April 1, 1975, or about 13 percent of total retail stocks of non-food goods. 17/ In 1975, prices were cut on unfashionable and shopworn goods by 59 percent; even with such steep price cuts, a "significant" share was not sold. 18/ During 1971-74, the budget allocated 2.4 billion rubles to compensate retail stores for losses on such sales, 19/ and in 1975 "over a billion rubles" were allocated for this purpose. 20/

At the root of this persistent problem is the chronic inability of enterprises producing consumer goods to turn out products with the quality, design, and mix that consumers wish to purchase. Over the past decade, the Soviet press has provided a mountain of evidence of the poor quality of consumer goods. The following is a sample of recent evidence: in 1974, over one-fifth of

the cotton fabrics, knitwear, and leather footwear and over one-quarter of synthetic fabrics inspected by trade inspectorates was rejected or downgraded; 21/ in the first half of 1975, the percentage of light industry products rejected by trade inspectors was essentially unchanged from previous rates; 22/ 23-25 percent of all refrigerators inspected by national inspection agencies in 1973-74 were defective, and in the first quarter of 1975 the share was 40 percent; 23/ in 1973, the State Trade Inspectorate scrapped 19 percent of the washing machines, 27 percent in 1974 and 14 percent in the first quarter of 1975; 24/ unpopular models of vacuum cleaners are "inundating" the stores (in the fall of 1975); 25/ work clothes frequently shrink 12-15 percent after the first washing; 26/ in 1973, wholesale trade organizations rejected 13 percent of all clothing and knitwear and 8 percent of all shoes; 27/ in 1975, customers and stores rejected nearly 500,000 refrigerators, about 9 percent of total output. 28/ Some of this evidence relates not only to physical quality per se, but also to obsolete design and fashion. Soviet industry adapts with great delay and difficulty to changes in technology and in consumer taste. In 1973, for example, two-thirds of the washing machines were of the obsolete hand-wringer type. 29/

Most refrigerators are still small-size, and in 1975 less than 10 percent of the TV sets produced were color sets. Pants suits and platform shoes came to the USSR several years after they were common elsewhere.

Another problem related to product mix concerns imbalances in the availability of complementary goods. Recent examples cited in the press include: a plethora of cameras and acute shortages of film; tape-recorders but no tape; lenses but no eyeglass frames; flashlights, transistor radios, electric shavers but no batteries. The chronic shortage of spare parts for almost everything is legendary -- "Motorists literally have to search for years to find batteries, switches and similar parts for cars". 30/ A shortage of rubber washers in Moscow results in waste of millions of gallons of water every year. 31/ Tableware rarely is available in sets, and in 1975, for example, the plans of one ministry (the Ministry of Defense) provided for manufacture of 11.2 million stainless steel spoons and only 1.8 million knives and forks. 32/ An acute shortage of some random household items, such as meat grinders or bread boxes, frequently creates a hue and cry in the press, which ultimately results in large surpluses. Shortages of a product in particular geographic areas and surpluses in another are common, even though supply and demand may be balanced overall.

Press reporting on these indicators of pervasive malaise in consumer goods markets in 1975 does not differ essentially from what it was 10-15 years earlier. The reasons for the chronic problems are the same. First, there is the "second class" status and secondary priority of the industrial sectors making consumer goods and of the distribution and service network catering to consumers. This situation prevails, notwithstanding Party Secretary Brezhnev's excoriation of those who treat consumer goods as a "second-class" sector. 33/ The true status of the sector is reflected in practice in the relatively inferior quality of materials and manpower allocated to the sector and the relatively low wages and generally inferior social status of trade and service jobs.

Second, incentives throughout the supplier-producer-transport-distribution chain are geared mainly to fulfilling plans for output or other activity measured in rubles or physical units or both. The change in labels introduced by recent economic reforms (from gross value of output to sales) and the addition of success indicators, such as profits and labor productivity, have not altered the fact that in actual practice the real priority attaches to fulfilling plans for output, with emphasis on physical measures. Moreover, when value indicators (cost, output, profits) are indeed used to measure and reward performance, they continue to be based on arbitrary prices set by

administrative bodies in ever greater detail. As a consequence, some goods are "profitable" to produce and others "unprofitable", regardless of demand (e.g., spoons, but not knives and forks; sofas and armchairs, but not kitchen chairs). Some products are "profitable" for retail stores to sell (e.g., alcoholic beverages) and others bring losses because of low trade markups (e.g., fish, vegetables, canned fruit, eggs, jam, laundry soap and windowglas). 34/ Continuous tinkering with prices and success indicators during 1965-1975 has left the basic problems largely untouched. Although one or another aberration may have been removed, others have been created.

Third, although management of food processing and soft goods production is concentrated in the Ministries of Food and Light Industries, production of durables and miscellaneous household items is scattered among dozens of ministries. This sector has simply been allowed to grow like Topsy, much of it as side-line operations in enterprises in heavy industry. In 1975, 50 ministries and organizations were in charge of the production of such goods, whose share in output of heavy industry rose from 10 percent in 1970 to 12.4 percent in 1975. 35/ This period also witnessed a high-priority campaign to enlist all heavy industry plants in producing consumer goods of one kind or another, particularly those of the "odds

and ends" variety. 36/ The result of this haphazard, campaign-style approach to development of production capacity for household goods has been faulty planning and forecasting of demand, poor quality and mix of output, a "poor relative" attitude toward such output, failure to develop repair and service facilities parallel with output of major durables, and a low level of specialization. In 1971, for example, 9 ministries produced 35 models of washing machines in 35 plants, only 11 of which were specialized. 37/

Fourth, connections among the several links in the chain from materials supplier to producer to distributor to seller of consumer goods are administrative or bureaucratic rather than economic in nature. The USSR has not found a method for ensuring that each link in the chain is rewarded or punished economically, depending on whether retail customers buy or do not buy a given product. A chemical plant making dyes, for example, cares only to fulfill its own plan as measured by the relevant rubles or tons; it is not affected economically by the fact that the printed cloth in which its dyes are used fades, or the colors run after the first washing by a Moscow housewife. For the most part, the worst that will happen is for the plant to be roundly scolded in Pravda. Connections in the producer-consumer chain are administrative

at each stage because of the absence of alternative suppliers, producers, distributors, and even products. Although ultimately some feedback may occur, the mechanism is slow and cumbersome. The system of economic contracts, "direct ties," fines, and penalties for contract violation has proved ineffective, and the multiple tinkering with these arrangements over the past decade have improved matters only marginally.

B. Money Incomes, Goods Availability, and Accumulation of Liquid Assets

Much attention and argument among Western analysts has centered on the question of the interpretation of these facts: (1) per capita savings deposits have been rising over the past two decades at an average rate of about 15 percent annually, more than twice as fast as both per capita disposable money incomes and per capita outlays on goods and services; (2) by 1975, per capita savings deposits had reached 357 rubles, over two-fifths as large as per capita disposable income; (3) total savings deposits amounted to 91 billion rubles in 1975, equal to 43 percent of total retail trade turnover in that year and amounting to over 5 months' earnings for the average state wage and salary worker. These and similar data and calculations have been used, in particular, to suggest the presence of a sizable and perhaps growing amount of repressed inflation in the USSR.

In other words, the rapid buildup in liquid asset holdings in the form of savings deposits is taken to mean that people are being "forced" to save, because the government has failed to provide the goods and services that people wish to purchase at their income level.

These facts and interpretations of them involve several issues. First of all, the true rise in consumer prices cannot be measured. While there are published data on price changes in official markets (State retail trade network and collective farm markets), these data have long been suspect. As indicated in II above, the implicit price index calculated by juxtaposing independent measures of real consumption and Soviet retail sales in current prices shows an average annual price increase of 1.3 percent over the past 20 years. The official Soviet indexes show almost no increase. Comparison of the two indexes suggests that a slow rate of price increases in official markets has been hidden by a faulty price index.

Second, by all accounts extensive "unofficial" or "parallel" markets coexist with official markets. There is no way to measure either the size of these markets or price changes in them. In fact, systematic analysis of these markets and integration with analysis of official markets has yet to be done. Much anecdotal

evidence, including statements by recent emigrees, indicates that both the level of prices and the rate of increase of prices in unofficial markets have been much higher than in official markets. 38/ The unofficial markets not only absorb spillover purchasing power from official markets, but also generate incomes; since neither incomes nor expenditures can be measured, one can only say that the phenomena may or may not reflect repressed inflation on the macro level. However, their presence certainly reflects the failure of official channels to satisfy consumer wants in numerous individual markets for foods and services.

Third, there is the question of whether the state has been able to achieve reasonable balance between aggregate money incomes and aggregate money expenditures, allowing for a planned growth of savings at "normal" rates that one would expect to accompany both gradually rising per capita incomes, monetization of the economy, and development of modern savings institutions. The data shown in Table 4, though admittedly far from definitive, suggest that fairly good balance has indeed been achieved on the whole, better in some periods than in others. The pattern seems to be one of ebb and flow; excess growth of incomes in one period relative to growth in goods tends to be met with corrective actions, either to increase the supplies in official markets and/or

to slow down the growth of incomes.

Fourth, questions arise about how to interpret the notable buildup of savings deposits. Why do people save in the Soviet Union? Is the savings rate abnormally high compared with other countries? Do the accumulations indicate a rising marginal propensity to save, i.e., are people saving a rising share of rising incomes? Since 1955, savings deposits have been almost the only significant outlet for savings in the USSR; state loans and private housing are negligible by comparison. Savings deposits yield current income of 2-3 percent and hence are to be preferred to hoards, unless the populace fears confiscation. Most important of all, probably, is the fact that for all practical purposes, consumer credit is not available for most goods, especially those of good quality and in high demand. Even when credit is available, / required down payments are high, roughly 25 percent. Would-be purchasers of most big-ticket items, such as furniture, appliances, and cars, must pay cash. Credit sales amounted to only about 5 percent of all retail sales of non-food goods in 1974. Purchasers of cooperative housing must make down payments of 40 percent of the cost (about 2,500 rubles). 39/ Since the early 1960s, at least, saving to buy appliances and furniture has been stimulated by steady growth in construction

of new apartments, by rapid expansion in quantities of home appliances available, by the show shift in their mix toward models of more modern design, and by perennial government publicity promising more and better appliances in the future. Finally, savings behavior in the decade 1965-75 surely was affected by the government's decisions to greatly expand production of passenger cars and to allocate a larger share of annual output for sale to the population. Between 1970 and 1975, the number of cars sold to the people rose about 6-fold. A Zhiguli costs about 7,500 rubles in 1975 and must be paid for in cash. Finally, a substantial amount of liquid assets surely is highly desirable to hold "just in case," in view of the chronic uncertainties as to just when some desired article may appear in the stores or when one's position on a waiting list may reach the top.

Although comparisons are tricky, because there are no data on currency holdings in the USSR, the savings rate does not appear to be abnormally high in the USSR. Average and marginal propensities to save have been calculated for the period 1955-75, using the data on per capita disposable money incomes given in Appendix B, Table 1. Deposits in savings accounts are taken to represent total saving, and the "alternative" price index is used to express both incomes and savings in

real terms. For the period as a whole the marginal propensity to save is shown to be 6.7 percent. 40/ The average propensity rises slowly from .08 percent in 1955 to 4.1 percent in 1975. There is no statistically significant tendency for the marginal propensities to rise during the period.

If, as suggested by these calculations and those of other investigators, saving by Soviet households out of current income is not high by comparison with other countries, what may account for the evident concern of Soviet planners over the persistent rapid buildup of total deposits, some 70 percent of which are demand deposits. 41/ Soviet economists seem to be uneasy over the growing amount of what they call "postponed demand." Probably, they believe that planning is made more difficult because of uncertainty about how much the populace may save voluntarily and what the people may choose to do with the large absolute sums available for discretionary use. After all, 91 billion rubles is larger than total retail sales of non-food goods in 1974 and represents a potentially destabilizing element. Total deposits in 1975 exceeded the Ninth Five-Year Plan target by some 11 billion rubles. Some of the savings might fuel the so-called "second economy", or unofficial markets not subject to planners' control. Also, the Soviet government may feel uneasy about the growing

accumulations of private wealth and by the fact that possession of sizable cash assets makes the average worker more independent of state control. And, too, the Soviets may view the accumulation of large amounts of savings simultaneously with sizable accumulations of inventories of unsaleable goods as indicating pervasive planning failures. Finally, they may fear that work incentives will be adversely affected by the pent-up demand, if desired goods are not forthcoming with reasonable speed. In a word, they may believe that the people's savings are indeed "forced" savings, at least in part.

IV. Policy Options

Over the past quarter century, the Soviet economic system and the policies of its leadership have produced an impressive rate of growth in total national product and in per capita consumption. The success in raising levels of living quantitatively, however, has been accompanied by snail's pace progress in improving the population's lot in a qualitative sense. In fact, the policy of giving people more of almost everything has itself contributed to the urgency of faster qualitative gains. As it enters the third quarter century, the Soviet economy faces the strong likelihood of much slower economic growth in the future and a slowing of growth in consumption, as well. Continued slowdown in the latter

is implicit already in the goals established in the Tenth Five-Year Plan, which also reasserts the traditional priorities of significantly more rapid growth of producer goods than of consumer goods.

Given these prospects for quantitative gains and the current set of problems in managing the consumer sector discussed above, what situations may confront the Soviet leadership and what seems to be its policy options, their costs, and probable benefits? The Soviet people over the years have come to expect visible, albeit modest, progress in meeting their wants. Such has been their experience since World War II, even though grandiose plans may have been met only in part, and scheduled welfare measures may have been delayed. As long as the economy can provide a little more food, clothing, durables, and services each year, consumer expectations likely will be met insofar as quantitative gains are concerned. The Soviet people also are accustomed to difficulties in acquiring goods and services, chronic deficiencies of quality and mix, sporadic shortages and queues. Along with this, they probably expect a little progress in improving the quality and mix of products. Prospects are for more of the same. Despite the label of the "plan of efficiency and quality" attached to the Tenth Five-Year Plan, no big gains in

these areas seem likely. Repeated tinkering with administrative arrangements in the past aimed at removing these blights from the consumer scene has produced few positive results. 42/ As of this writing, the outlook is for more "improvements" in planning and administrative arrangements along past lines, as well as for continued frustration at the persistence of the problems they were designed to solve. Thus, evidence of pervasive dis-equilibria in a host of individual markets is likely to remain a familiar part of the Soviet scene, along with a flourishing "second economy" to provide some corrections.

Should the leadership opt to seek a substantial increase in consumption and a major improvement in its qualitative aspects, it would find itself faced with dilemmas and conflicts of priorities and shackled by ideology. The fundamental conflict is between consumption and growth. A speedup in the rate of construction of housing, and infra-structure to service the automobiles provided, and more retail trade and service facilities would be a boon to consumers, but the substantial resources needed to overcome past neglect in these areas would divert labor and investment resources from growth-oriented ends. Industrial facilities for producing consumer goods are relatively technologically backward, and much capacity represents merely side-line production.

Large gains, both quantitative and qualitative, could be had by building specialized plants, especially for consumer durables and the numerous items of ordinary household use. Such a program, however, would claim investment resources; imports of specialized modern plants from the West would take resources of hard currency that otherwise could be used to purchase modern plants to produce steel, for example. As an alternative, finished consumer goods could be imported on a larger scale and sold to consumers with the stiff price markups now in effect. ^{43/} While such a move would increase consumer satisfaction and absorb some of the rubles that otherwise might go into savings deposits, the requisite hard currency would have to be taken from competing uses. Except for the last, policies involving major reallocation of resources to consumption would not have quick payoffs, and any attempt to implement them quickly might create serious disruptions in the short-run, thus exacerbating the conflict between growth and consumption.

Another source of conflict is inherent in the necessity to maintain work incentives, if economic progress is to continue. Along with steady increases in real consumption, the population has come to expect a steady, even if slow, rise in money incomes. In fact, despite much emphasis on "moral incentives" and socialist competition during the Ninth Five-Year Plan, the

government is basically relying on material incentives to elicit work effort. Thus, money incomes are scheduled to grow, albeit slowly, during 1976-80, more or less in line with planned growth in goods and services. If past behavior prevails, the worrisome accumulation of liquid assets in the hands of the population will also continue. These accumulations have the potential for serious disruptive affects, should some crisis of confidence occur. The government's options for dealing with this situation are not very good. One easy method already being used to capture some of these rubles is to encourage the purchase of insurance. During 1971-75, net insurance premiums tripled and in 1975 amounted to 2 billion rubles. Taxes could be raised and bond purchases made compulsory, but the government as of now has committed itself to reducing taxes and redeeming past bond issues. A change in this policy would carry great risks of alienating the populace, to the detriment of work incentives and perhaps also to social and political stability. For similar reasons, confiscation of savings accounts directly or via a currency revaluation would not be a likely remedy.

An option that would both absorb large amounts of liquid asset holdings and increase quantitatively measured output would be to permit more private activity of various kinds. By easing restrictions on investment in cooperative

and private housing, the government could induce the population to take over more of the cost of providing housing and to pay the full maintenance cost as well. Surely, both parties would be made economically better off thereby. Similarly, easing restrictions on private activity in providing services of all kinds would accomplish similar ends, and would also help to convert grey or black markets into legal ones. Restraints on private activities in agriculture could be eased, a policy that has invariably yielded quick response in output gains in the past. But official ideology militates against encouraging private activities. State-provided housing is viewed as the wave of the Socialist future, and private housing is viewed as a relic of the past. Private activities are considered an anachronism in a centrally planned economy where the means of production are supposed to be state property.

Another measure that would benefit both consumers and the State would be to raise retail prices for selected goods and services, so as to clear individual markets and eliminate subsidies. With present prices, for example, there is excess demand for many foods and for housing, along with large State subsidies to maintain these prices. There, again, however, oft-repeated dogma stands in the way of raising prices. Low rents and stable retail prices are touted as among the virtues of a centrally

planned socialist economy. Indeed, the Soviet people have come to expect low and unchanging prices for a variety of basic goods and services. Aside from ideology, the leadership must take this expectation into account. Khrushchev's sudden hike in the prices of milk and meat in 1962 resulted in civil unrest.

Painful though the choices may be in respect to policies designed to raise output of consumer goods and to better manage money incomes, they are probably much less so than those that attend any serious effort to provide major qualitative improvements in the consumer sector. Poor quality, mix and design of consumer goods, random shortages and surpluses of individual goods, queues, black and other colored markets -- all have characterized the consumer sector from the outset of central planning. They are rooted in the nature of the system itself and in the set of priorities persistently maintained. Even if the secondary priority status of the consumer sector were changed, however, these kinds of qualitative malaise would remain. Repeated attempts over the past decade at piecemeal reform in the economy's working arrangements -- prices, norms, managerial incentives, rules governing financial and contractual matters, allocation of supplies and equipment -- have not altered their essential nature in any respect, nor has more extensive use of computers and mathematical models.

To remove the chronic malfunctions in the consumer sector, changes would need to be made that would alter the very system itself. Since the problems in the consumer sector are largely micro-problems, not macro ones, a shift to the use of market arrangements in at least major parts of the economy should provide a solution in the long-run. Such a sweeping change would surely create major disruptions in the short-run, however, and would entail enormous political risks. The Party's control over policy and resources would be greatly weakened by the introduction of "market socialism", as would its grip on the lives of the population. Bureaucratic resistance to any major reforms, especially ones entailing transfer of major functions, such as price-fixing and allocation of supplies, to markets would be ferocious. Serious and perhaps destabilizing conflicts within the Party leadership surely would result. Attempts to solve consumer and efficiency problems merely by a shake-up in the administrative apparatus, rather than by introducing markets, would likely do much more harm than good, as did Khrushchev's innovations in the 1960's.

Each of the policy options discussed above is riddled with potential conflict within the political leadership, whether Brezhnev and company or their successors. None of the choices promises large gains in per capita consumption without an accompanying cost in investment

and growth. An economic reform that ultimately might alleviate the qualitative problems could not be implemented without short-run costs and long-run problems of its own. Given these considerations, it is not surprising that Soviet leaders up to now have come down on the side of prudence. Treading along a familiar path may have its costs in continued frustration of the population's desires, but such a course carries minimal risk of social and political upheaval. No one can say what future leaders may opt to do. One can be fairly sure, however, that they will face the same difficult choices as does the present leadership. Meanwhile, painful decision can be postponed by a concerted effort to obtain the largest possible infusion of technological aid and consumer goods from the West on the best terms possible.

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41. Yv. M. Belugin, Ekonomika sberegatel'nogo dela, Moscow, 1975, p. 53.
42. There is much evidence on this point. For example, a recent opinion survey of light industry managers of enterprises and department stores showed that considerably fewer than half of them thought that the change from value of output to sales as a success indicator had produced positive results in terms of quality improvement and satisfying consumer demand. Department store managers were much more negative than enterprise managers. Ekonomika i organizatsiya promyshlennogo proizvodstva, No. 5, 1975, pp. 107-121.
43. In 1973, the price markup on various items of cloth, clothing, knitwear and shoes ranged from 2.7^{times} to 11.1 and averaged 5.5. The markup on furniture was 2.2 in 1974 and for consumer durables and related items it was 6.1. These ratios were calculated from data on imports of these items in retail prices cited in P. A. Lokshin, op.cit., pp. 157, 171, 191, 193; and in foreign trade prices in Vneshnaya trgovlya SSSR v 1973 godu, p. 48-49 and Vneshnaya trgovlya SSSR v 1974 godu, p. 52.

APPENDIX A

Estimate of an Index of Consumption for the USSR

The following tables present the index of consumption in the USSR in its revised and updated form. The revised index differs somewhat from that published in JEC, Soviet Economic Prospects for the Seventies, June 1973, p. 396ff, because:

- 1) the base weights and prices have been shifted from 1968 to 1970;
- 2) several new line items have been added; and,
- 3) the techniques used to estimate several line items have been changed or refined.

Table 1 presents the indexes of total consumption and per capita consumption, by major category. Table 2 presents the component indexes in detail. Table 3 outlines the basic type of data used to derive each line item series and gives the weights used to aggregate them. The estimates for 1975 are preliminary and may change substantially as new statistical material appears. The following paragraphs provide a general description of the indexes and the underlying data, along with a detailed explanation of the revisions.*

* Detailed source notes are available from the authors on request. A full methodological description and documentation of the index is to be presented in a forthcoming CIA publication.

Limitations of the Consumption Index

Construction of an index of consumption must proceed within the limits of Soviet data. The index therefore cannot be viewed as a precise measure of changes in consumption between two consecutive years. Nevertheless, it is believed to be a reasonably accurate indicator of Soviet real personal consumption over time. The basic data are fairly reliable, double counting has been reduced to a minimum, and both the sample and the weights are adequate. At the same time, some of the improvement in quality of goods and services that has occurred over time can be incorporated satisfactorily.

Basic Data

Slightly over half the line items presented in the index (see Appendix Table 3) are based directly on official Soviet production series expressed in physical units or value terms*. About one-fourth (the services sector) is based on estimated expenditures, another 15 percent is based on retail sales and the remaining few line items are based on Soviet reports of quantities consumed. To eliminate double counting of products at different stages of production, the portion undergoing

* Production series are adjusted for foreign trade and inventory changes insofar as possible.

further processing has been netted out of the quantity available for human consumption. Series based on the value of production or retail sales in constant prices are official Soviet series, which are used in the index because no alternative data are available. Considerable reservation attaches to the reliability of Soviet pricing practices and price indexes.* Finally, the Central Statistical Administration states that food consumption in kilograms is calculated from an overall production-consumption balance and does not rely solely on either budget survey or production data.**

* See, for example, Rush V. Greenslade, "Industrial Production Statistics in the USSR" in Vladimir G. Treml and John P. Hardt (eds.), Soviet Economic Statistics, Durham, N.C., Duke University Press, 1972, pp. 155-194; and Morris Bornstein, "Soviet Price Statistics," in Ibid., pp. 355-396.

** Vestnik statistiki, No. 2, 1971, p. 60-63. At the same time, the article points out, calculation for some products -- the more pure ones such as sugar and potatoes -- is more accurate than for those products with numerous subproducts such as meat. Balances worked out, by us, for three of the four food series in the index that are based on per capita consumption data indicate that the quantities are at least reasonable and consistent with production and utilization data. The fourth series, flour and groats (grain and grain products in Russian), is not. We believe it is understated, primarily because the budget survey is not representative of the entire population, excluding low income groups who tend to eat more grain products than middle and upper income groups. Furthermore, this balance calculation is particularly complicated because the grain and grain products group contains 60 different kinds of grain products, all of which are converted to flour equivalents with standard factors (ibid., p. 62).

The unit prices used to aggregate the production-based series are less satisfactory. Unit prices are either retail prices (used if the product moves through the retail channel only) or combination prices reflecting all marketing channels. In both cases, the retail price (or part of price) is based on Moscow observations or on official price handbooks that may or may not reflect real retail prices, but are believed to be the best available. Prices for products consumed in-kind and purchased in collective farm markets are taken from CIA A (ER) 75-76, USSR: Gross National Product Accounts, 1970, November 1975, p. 32 ff. (hereafter GNP, 1970). Although the average prices may not be exact, the relative levels -- for example, between meat and fruit -- are reasonably accurate.

Sample

The sample ^(which) comprises over 95 percent of consumption, includes as complete a basket of goods and services in as much detail as possible from regularly published data. It ^(total food and durable) encompasses ~~goods~~ consumption, total consumption of health and education services, over 90 percent of soft goods consumption, and nearly all of the major household services. The items not represented, such as matches, kerosene, and some of the lesser services, are relatively unimportant. Their absence probably does not bias the index seriously.

Weights

The expenditure weights used to aggregate the component indexes -- food, soft goods, and so forth -- are from GNP 1970, p. 8. About 55 percent of the price or purchase weights used to aggregate the line items within the components are based directly on published data in the base year. The remainder are based on adjusted production valued at prices of the base year or on estimated total expenditures.

General Notes on Sources

Production, per capita consumption, and retail sales data, as well as the price indexes to deflate retail sales data, are from the annual Soviet statistical abstract -- Narodnoye khozyaystvo v ... godu. Also from the abstract are data on inventory change (wholesale and retail) used to adjust

production data. Foreign trade data, also used to adjust production data, are from the annual foreign trade statistical abstract -- Vneshnyaya trgovlya za ... god. Sovetskaya trgovlya, Moscow, 1964, and various issues of the monthly statistical journal, Vestnik statistiki, added useful information on the distribution of some products within a given line item category.

In order to eliminate double counting of products at different stages of production, the portion further processed is netted out of the quantity available for human consumption. For example, flour and sugar used in confectionery are subtracted from total flour and sugar consumed, adjustment is made for canned foods, and so on. Adjustments are based on sources such as L. V. Opatskiy, Razmeshcheniye pishchevoy promyshlennosti SSSR, Moscow, 1958, V. P. Zotov, ed., Pishchevaya promyshlennost' SSSR, Moscow, 1967, and N. V. Vinogradov, ed., Ekonomika pishchevoy promyshlennosti SSSR, Moscow, 1968.

Two types of prices are applied to the production data to value those line item series that are production based -- retail and combination. Retail prices are used for those products which move primarily or entirely through the state store network; combination prices are used for those products which move through collective farm market and in-kind channels as well

as retail. Retail prices are based on price observations in Moscow during 1969-71. Retail prices for fruits and vegetables are seasonally adjusted. Combination prices are based on retail prices (observed in Moscow during 1969-71), average collective farm market prices and estimated in-kind prices (from GNP 1970, p. 27ff) and estimated prices paid by the military. These prices are weighted by their respective shares of the total consumed.

The component weights and estimates of expenditures on services in 1970 are from GNP, 1970, p. 8. Annual expenditures on services are estimated with the aid of indexes to move the base weights. In some cases, such as housing where the index indicator is housing stock, the result is probably a reasonably accurate reflection of true expenditures. In other cases, however, such as recreation, art, and culture where the indicator is movie admissions, the result is less satisfactory. The bulk of the data used to derive the services indexes -- budget, employment, wage, investment, construction, transportation, communication, and so on -- are from the annual statistical abstract. Various textbooks and trade journals were additional sources of useful information, particularly in the utilities sector.

Impact of Changes in Weights and Methodology

The revised index uses base year weights for 1970 instead of 1968. The new weights are taken from a comprehensive and consistent set of national accounts in 1970 (GNP, 1970). The weights for major components of the consumption index, therefore, are much more reliable than those previously used. With respect to individual line items within major components, prices for 1970 were obtained directly, thus obviating the need to update the original 1955 prices with official price indexes. Changes in the base weights per se had a negligible impact on the index for total consumption. Rounded to one decimal place, the average annual rate of growth during 1951-75 is the same (5.4 percent) with both sets of weights. Aside from base year weights, a number of revisions were made in respect to components and individual line items, with the objective of improving the accuracy of the index. The net effect of all these changes was to slow the growth of the index for total consumption during 1951-75 by 0.4 percentage points per year.

Revisions were made for particular components and line items as follows:

Food

(1) The fish index is based on per capita consumption instead of deflated retail sales.

(2) The confectionary index is based on production adjusted for quality change instead of deflated retail sales.

(3) The canned goods base weight is retail sales instead of production.

(4) The alcohol and soft drinks index is based on production adjusted for net trade instead of deflated retail sales.

(5) Tobacco has been transferred to the food component from soft goods.

The net effect of these changes has been to slow growth in total food consumption slightly by 0.1 percentage point per year during 1951-71.

Soft Goods

The index has been expanded and now includes 13 line items, comprising 93 percent of the base weight. The new items are household soap and synthetic detergents, toilet soap and perfumes, school supplies, and publications. The net effect of these changes is to speed growth of total soft goods consumption by 0.5 percentage points per year during 1951-1971

Other/ Durables and Miscellaneous Goods

The durables goods index has been completely revised. Originally an index based on a small sample of durable goods measured in physical units, it is now a broadly based series, including not only durable goods but miscellaneous other goods as well. Items such as toys, sporting goods, jewelry, and medical supplies are now included. Indeed, the series covers all items in the weight. The index represents retail sales of these products calculated in constant prices. Since data in current prices are regularly published in official

statistical abstracts, the procedure for calculating the index amounts to deriving the price index for them that is implicit in the official price index for non-food goods and the indexes for given sub-categories. More specifically, the component series for durables was calculated as follows:

(1) Total retail sales of non-food goods are published in Soviet statistical abstracts in current prices for each year; a constant price series can be calculated using the official retail price index.

(2) Retail sales of 17 groups of soft goods (accounting for 70% of all sales of non-food goods) are also given in current prices for each year; constant prices series can be calculated for each group, using official price indexes.

(3) Summation of the values for the 17 groups in current and constant prices in each year results in series for total sales of these soft goods in the two sets of prices.

(4) Subtracting the current and the constant price series for soft goods sales from the respective current and constant price series for total retail sales of non-food goods results in two residual series representing sales of all non-food goods other than the 17 groups of soft goods. The residual group is arbitrarily labelled "Durable and other miscellaneous goods". The series so obtained in constant prices is the new component index.

The index has shortcomings, in that it relies on dubious official price indexes and a less than complete understanding of how these indexes are calculated. Moreover, the component

index does not exactly match the base year weight in respect to coverage. Nevertheless, the new index is much more reliable and representative than the old index, which overstated growth significantly. The sample (all that could be obtained with available data) was made up almost entirely of products which had experienced phenomenal growth from a close-to-zero base in 1950. The new index grows by roughly 2-1/2 percentage points per year less during 1951-71.

Services

(1) A new line item -- trade union and Communist Party dues -- has been added.

(2) Base weights for utilities, recreation, transportation, and communications have been expanded in coverage.

(3) Allowance for privately supplied services has been made in the line item for repair and personal care.

(4) Several of the indexes used to move the base year weights have been broadened in coverage. For example, the communications index formerly relied on officially-reported revenues of the communications industry; it now is based on the summation of expenditures on the various types of communications (see Table 3).

(5) Manhours worked, rather than average annual employment, is now used to move the wage component of the base year weight for health and education. Revision of the materials purchases component of the indexes for health and education could not be completed in time for this monograph.

The net _____>

effect of all these changes has been to slow growth of
of personal services by 2-1/2 percentage points per year
during 1951-71, and to slow growth of health and education
services by 2 percentage points per year.

USSR: Indexes of Consumption by Component, 1970=100

Aggregate

	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
1 consumption	32.7	46.1	48.9	53.4	56.1	59.3	61.9	63.6	66.5	68.1	70.7	75.7	80.4	85.3	89.6	95.2	100.0	104.8	107.5	113.3	117.8	122.5
household	32.1	45.5	48.3	53.1	55.9	59.1	61.7	63.3	66.2	67.5	69.9	74.9	76.9	84.6	89.2	95.0	100.0	105.0	107.6	113.6	117.9	122.6
Food	39.2	53.6	56.0	60.2	62.6	65.9	67.2	68.6	71.7	73.0	74.8	79.9	83.5	88.9	92.3	96.4	100.0	104.1	103.8	110.4	113.4	116.3
Soft goods	23.1	35.9	40.1	46.2	50.9	53.9	58.6	60.4	62.5	62.8	64.6	69.0	74.8	78.2	84.0	93.7	100.0	104.5	107.7	111.2	115.2	120.1
Durable and miscellaneous goods	9.9	24.0	26.4	32.4	35.7	39.3	44.9	45.9	48.5	48.3	53.2	59.9	67.3	73.6	82.3	89.5	100.0	113.7	130.6	141.4	153.1	166.5
Services	30.2	40.1	42.2	46.8	47.9	51.0	53.4	56.1	59.8	63.2	67.7	72.9	78.3	84.2	89.6	94.5	100.0	105.1	110.5	116.0	122.6	129.4
Non-durable	37.5	50.7	53.9	55.8	57.4	60.6	63.7	65.8	68.3	72.6	77.0	81.6	86.6	89.8	92.2	96.4	100.0	103.4	107.2	111.2	116.8	121.2
Education	39.4	49.6	51.2	53.0	54.0	56.4	58.7	61.5	66.5	71.2	76.0	81.3	86.3	90.2	93.2	97.8	100.0	104.3	108.8	113.2	119.5	123.5
Health	34.5	52.4	58.1	60.2	62.7	67.2	71.6	72.6	71.1	74.9	78.5	82.2	87.1	89.1	90.5	94.1	100.0	102.1	104.8	108.0	112.5	116.1

Per Capita

	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
1 consumption	44.3	57.0	59.5	63.8	65.9	68.4	70.2	70.8	72.8	73.5	75.3	79.6	83.6	87.7	91.3	96.1	100.0	103.8	105.5	110.2	113.4	116.8
household	43.2	56.3	58.7	63.4	65.7	68.2	69.9	70.5	72.5	72.8	74.4	78.8	82.7	87.1	90.9	95.9	100.0	104.0	105.5	110.4	113.6	117.5
Food	52.0	66.3	68.1	72.0	73.5	76.0	76.2	76.3	78.5	78.8	79.6	84.0	86.8	91.5	94.0	97.3	100.0	103.1	101.8	107.4	109.2	110.9
Soft goods	31.2	44.5	48.7	55.2	59.8	62.2	66.4	67.2	68.5	67.8	68.8	72.6	77.7	80.5	85.6	94.6	100.0	103.5	105.7	108.1	110.9	114.5
Durable and miscellaneous goods	13.3	29.7	32.1	38.7	42.0	45.4	50.9	51.1	53.1	52.1	56.7	63.0	69.9	75.8	83.9	90.3	100.0	112.6	128.2	137.5	147.4	159.1
Services	40.8	49.6	51.4	55.9	56.3	58.9	60.5	62.5	65.5	68.2	72.0	76.7	81.4	86.7	91.3	95.3	100.0	104.1	108.4	112.8	118.0	123.4
Non-durable	50.5	62.6	65.5	66.7	67.4	69.9	72.1	73.2	74.8	78.3	81.9	85.8	90.1	92.4	94.0	97.3	100.0	102.5	105.2	108.1	112.5	115.5
Education	53.1	61.4	62.3	63.3	63.4	65.0	66.5	68.5	72.8	76.8	80.9	85.5	89.7	92.8	95.0	98.7	100.0	103.4	106.8	110.1	115.1	118.2
Health	46.5	64.8	70.7	71.9	73.6	77.5	81.1	80.8	77.9	80.8	83.6	86.4	90.5	91.7	92.2	95.0	100.0	101.2	102.8	105.1	108.4	111.5

MEMORANDUM FOR:

Table 2

USSR: Indexes of Consumption by Line
Item, 1950, 1955-75

includes 5 sheets as follows:

- 1) Food, 1950, 1955-64
- 2) Alcohol, soft goods, durables, 1950
1955-64
- 3) Food, 1965-75
- 4) Alcohol, soft goods, durables, 1965
1975
- 5) Services, personal and communal,
1950, 1955-75

6/15/76
(DATE)

Table 2

USSR: Indexes of Consumption by Line Item-1950,1955-75

	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
Animal Products											
fish	33.7	49.3	50.7	52.2	54.2	55.2	56.7	57.5	59.8	65.8	74.4
meat	39.6	54.1	56.0	-60.6	63.7	74.9	72.3	72.2	75.3	78.7	72.5
slaughter fat	37.1	52.2	55.0	64.9	65.8	74.6	69.8	73.5	80.4	86.8	64.8
milk	47.9	55.7	63.0	70.4	76.9	79.5	79.5	77.2	76.8	74.0	74.8
butter	34.1	47.0	53.5	57.7	64.4	66.2	68.9	70.6	70.4	71.6	75.7
cheese	15.2	27.6	30.8	32.4	35.4	36.8	40.6	42.7	47.5	48.3	57.5
eggs	28.9	45.8	48.4	55.1	56.9	63.0	67.9	72.3	74.4	71.0	66.5
Processed Foods											
sugar	19.2	45.3	47.3	49.7	51.9	55.0	64.6	68.3	71.4	76.3	77.5
vegetable oil	22.8	56.0	64.7	64.8	61.5	64.6	69.2	74.2	77.4	81.4	96.6
magarine	25.6	53.0	55.9	58.2	54.8	58.1	61.7	63.9	67.4	75.2	83.2
confectionary	31.3	44.6	50.9	51.0	54.5	57.7	56.0	58.3	63.1	65.9	74.5
canned goods	14.5	29.8	32.9	36.7	39.5	42.7	46.0	52.2	63.3	58.9	68.1
macaroni	28.9	69.8	63.7	71.6	77.0	73.8	80.8	80.7	87.8	63.0	94.5
Basic Foods											
potatoes	137.5	92.0	93.6	95.9	98.3	100.1	97.1	98.8	99.7	100.6	101.2
vegetables	50.4	74.9	75.5	77.6	77.5	76.2	84.8	80.6	77.4	72.7	95.4
fruit & berry	36.7	44.4	37.2	59.9	64.4	58.1	56.4	53.7	62.4	66.8	66.5
flour & groats	75.0	94.6	-94.5	-93.9	-92.2	-92.7	93.2	93.6	94.5	90.3	92.8

(goes under sheet 1)

Alcohol, Soft Drinks, Tobacco

	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
alcohol, soft drinks	20.1	36.8	38.7	43.4	45.5	45.5	48.0	51.2	56.9	60.6	64.3
tobacco	29.3	43.2	45.6	47.5	49.3	51.2	53.7	55.2	56.2	59.1	63.4
TOTAL	39.2	53.6	56.0	60.2	62.6	65.9	67.2	68.6	71.7	73.0	74.8

Soft Goods

cotton	91.7	134.9	119.8	123.2	117.5	125.0	126.2	113.0	108.0	103.4	101.3
wool	55.4	49.9	66.1	84.0	91.6	92.5	109.3	101.5	92.5	84.1	83.2
silk & rayon	19.7	56.3	69.0	86.0	88.6	85.1	87.8	84.3	89.7	89.2	85.0
linen	32.2	30.7	41.6	54.4	60.5	61.7	66.9	67.5	68.1	68.4	69.3
sewn goods	15.0	22.7	30.2	37.8	45.3	49.6	53.9	57.5	59.8	58.6	57.1
hosiery	35.3	57.7	60.0	63.1	66.3	69.2	72.0	74.8	77.2	83.9	92.4
leather shoes	29.0	37.8	41.4	46.1	51.8	55.6	59.6	63.4	66.8	66.6	69.2
knitwear	15.1	32.0	32.2	34.4	36.7	38.8	43.2	44.9	47.7	50.9	58.7
haberdashery	11.9	22.7	25.5	31.5	35.1	38.3	43.5	47.1	51.7	52.9	55.0
household soap	23.1	36.6	40.3	42.3	45.2	45.6	50.1	52.6	54.0	60.3	61.8
toilet soap	25.3	44.5	45.9	53.0	57.6	61.4	63.3	65.8	68.7	69.9	72.2
school supplies	13.5	24.7	27.6	30.3	32.7	35.3	38.5	40.0	41.6	43.6	49.5
printed material	19.3	28.4	32.0	35.4	39.1	43.6	46.2	48.4	50.8	54.5	57.7
TOTAL	23.1	35.9	40.1	46.2	50.9	53.9	58.6	60.4	62.5	62.8	64.6

Durable & Other

Miscellaneous Goods	9.9	-24.0	26.4	32.4	35.7	39.3	44.9	45.9	48.5	48.3	53.2
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Table 2, sheet 3, food 1965-75
(continues to right of sheet 1)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
69.3	74.8	81.9	88.4	100.3	100.0	107.4	108.1	108.8	118.9	123.1	
68.7	72.6	79.1	86.2	94.5	100.0	106.3	112.3	118.6	123.8	129.4	
79.9	83.5	88.9	92.3	96.4	100.0	104.1	103.8	110.4	113.4	116.3	
99.8	105.0	109.4	108.9	107.7	100.0	96.8	92.2	96.3	88.0	88.0	
96.4	94.7	95.4	100.7	101.6	100.0	103.3	116.4	127.1	139.8	152.0	
96.1	99.1	101.9	97.1	93.5	100.0	98.3	114.5	122.9	130.1	139.0	
69.6	82.7	88.2	97.0	100.9	100.0	105.8	110.6	110.3	109.4	111.9	
57.1	62.7	62.7	70.6	90.6	100.0	106.2	107.5	109.4	112.5	118.8	
100.8	107.9	111.0	109.6	104.3	100.0	97.8	99.9	105.4	109.8	115.3	
74.1	79.4	84.4	89.9	93.7	100.0	100.0	99.1	100.2	105.1	107.2	
67.5	75.0	81.5	87.8	94.5	100.0	104.4	105.9	110.6	113.0	114.5	
61.2	67.4	72.7	80.7	89.9	100.0	111.2	121.8	126.0	132.4	139.0	
69.6	75.9	85.9	93.5	96.3	100.0	109.0	119.8	118.7	123.8	131.3	
75.1	79.3	85.0	88.6	94.5	100.0	108.8	115.5	121.9	129.3	135.8	
54.3	60.2	66.1	75.9	87.7	100.0	111.0	122.5	127.4	137.9	147.0	
65.7	73.0	80.0	84.4	94.5	100.0	106.0	112.5	118.7	125.0	131.3	
69.0	74.8	78.2	84.0	93.7	100.0	104.5	107.7	111.2	115.2	120.1	
59.9	67.3	73.6	82.3	89.5	100.0	113.7	130.6	141.4	153.1	166.9	

Table 2, sheet 4, alcohol, soft goods, durables 1965-75
(goes under sheet 3 and continues to right of sheet 2)

Indexes 1970=100										
1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
77.8	80.6	83.3	91.1	101.7	100.0	97.0	100.0	107.6	111.2	114.4
80.6	86.4	92.1	95.7	96.2	100.0	107.5	111.0	113.7	117.2	125.9
85.6	92.6	96.8	94.0	94.0	100.0	111.5	114.1	110.8	119.6	125.8
80.7	87.1	93.5	96.8	99.0	100.0	97.9	94.4	95.7	102.9	102.4
79.7	78.8	82.2	90.4	98.6	100.0	97.1	98.5	121.2	113.4	113.3
64.9	73.6	76.2	81.6	90.1	100.0	96.8	101.0	112.1	118.2	120.9
72.2	78.8	84.4	88.6	92.0	100.0	110.5	118.6	126.4	137.6	141.8
84.8	90.0	94.4	96.2	96.8	100.0	103.5	101.8	108.1	108.9	110.2
93.3	88.0	89.6	94.4	97.6	100.0	100.3	102.5	109.4	110.4	115.9
82.4	78.6	81.1	86.4	94.6	100.0	106.3	114.5	123.5	127.7	130.2
75.7	75.0	80.7	86.9	95.0	100.0	100.3	103.2	110.2	115.1	113.3
68.5	74.2	86.6	89.7	93.3	100.0	106.3	115.5	125.3	132.1	134.9
91.3	90.8	93.6	91.5	100.0	100.0	105.9	118.6	110.9	110.7	115.1
103.9	105.1	100.9	98.9	99.9	100.0	101.7	94.9	98.1	96.6	96.8
86.5	86.9	98.5	89.8	88.0	100.0	96.4	88.4	120.6	101.4	93.4
86.5	72.5	84.7	83.8	69.4	100.0	105.6	59.0	136.6	106.3	108.6
93.5	94.6	94.8	97.2	98.5	100.0	101.3	99.8	99.5	100.0	101.2

Table 2, sheet 5, personal, communal services 1950-75
(goes under sheets 2 and 4)

	1950	1966	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Personal services																						
Trade Union and Party membership dues	36.9	45.9	48.6	51.5	54.4	57.5	60.9	64.7	68.6	72.3	76.3	80.6	86.2	91.2	94.3	97.2	100.0	102.3	104.7	106.8	108.9	111.2
Housing	47.3	55.6	57.2	59.7	62.9	66.7	70.6	74.1	77.4	80.5	83.3	86.0	88.8	91.7	94.5	97.3	100.0	102.8	105.5	108.2	111.4	114.4
Utilities	22.2	28.3	30.4	32.7	35.3	38.0	41.0	47.0	53.0	59.1	65.3	71.6	77.1	82.5	87.8	93.8	100.0	105.7	111.4	117.6	126.0	137.1
Transportation	16.0	27.7	29.2	39.2	36.1	39.1	42.8	46.6	52.3	56.8	60.8	66.0	73.1	80.1	87.8	93.8	100.0	106.6	114.0	120.3	129.2	138.0
Communication	22.4	33.0	35.6	38.4	40.6	43.2	46.4	49.2	52.2	55.3	59.2	65.4	72.3	79.7	85.5	92.9	100.0	107.2	115.1	123.4	132.4	141.8
Repair and personal care	42.2	44.6	45.8	47.0	48.1	52.1	49.6	45.9	45.9	47.9	53.1	61.2	69.1	76.7	82.2	90.0	100.0	107.7	116.0	125.4	135.2	145.6
Recreation, art, and physical culture	32.8	53.3	57.8	61.4	66.0	68.4	71.0	75.6	78.1	79.3	83.9	87.6	88.3	93.5	97.4	98.2	100.0	101.8	102.9	104.9	106.3	106.7
Communal services																						
Education	39.4	49.6	51.2	53.0	54.0	56.4	58.7	61.5	66.5	71.2	75.0	81.3	86.3	90.2	93.2	97.8	100.0	104.3	108.8	113.2	119.5	123.9
Health	34.5	52.4	58.1	60.2	62.7	67.2	71.6	72.6	71.1	74.9	78.5	82.2	87.1	89.1	90.5	94.1	100.0	102.1	104.8	108.0	112.5	116.8

Table 3

6/10/76

USSR: Structure of the Index of Consumption

Product	Type of Data Used to Derive:	
	1970 Weight	1970 Base Weight
Total	100	
Food	49.0	
Animal products		
Fish	0.1	Retail Sales
Meat	8.6	Same as series
Slaughter fat		
Milk	1.7	Same as series
	4.3	Same as series
Butter	1.8	Same as series
Cheese	0.6	Same as series
Eggs	1.8	Same as series
Processed foods		
Sugar	3.4	Same as series
Vegetable oil	0.4	Retail sales
Margarine	0.6	Same as series
Confectionery	2.6	Same as series
Canned goods	1.2	Retail sales
Macaroni	0.3	Retail sales

Type of Data Used to Derive:

Series

Per capita consumption adjusted to total consumption by multiplying by midyear population. Production adjusted for trade and inventory change, priced at the 1970 average weighted price.

Tonnage is percent of meat production, priced at the 1970 retail price. Production $\frac{a}{e}$ reduced by quantity of milk fed and of milk used for further processing (butter, cheese, canning) priced at the 1970 average weighted price.

Production adjusted for trade and inventory change, priced at the modal observed 1970 retail price.

Production $\frac{a}{e}$ priced at the modal observed 1970 retail price.

Production reduced by quantity required for hatch, priced at the 1970 average weighted price.

Per capita consumption adjusted to total consumption by multiplying by midyear population) then reduced by the quantity of sugar required for confectionery, priced at the 1970 retail price.

Annual retail sales deflated by the official price index for vegetable oil $\frac{a}{e}$ Production adjusted for inventory change $\frac{c}{e}$, priced at the modal observed 1970 price.

Production by type adjusted for quality change $\frac{d}{e}$ Production by type adjusted for trade and inventory change, priced at the respective modal observed 1970 prices.

Retail sales deflated by the official price index for macaroni.

USSR: Structure of the Index of Consumption

Product	1970 Weight	1970 Base Weight	Type of Data used to Derive:	Series
Basic foods				
Potatoes	1.7	Same as series	<p>(consumption by multiplying by midyear population) Per capita consumption adjusted to total, priced at the 1970 average weighted price. Production reduced by a waste factor and by those quantities further processed, priced at the 1970 average weighted price. Production reduced by a waste factor and by those quantities further processed, priced at the 1970 average weighted price. Per capita consumption adjusted to total, reduced by quantities used to produce macaroni and adjusted for quality change, $\frac{K}{\text{consumption by multiplying by midyear population}}$</p>	
Vegetables	2.2	Same as series		
Fruit, berries and grapes	1.2	Same as series		
Flour and grain products	4.7	$\frac{K}{1}$		
Beverages and tobacco				
Alcoholic and soft drinks	10.6	Estimated retail sales $\frac{K}{2}$	Production of alcoholic and soft drinks adjusted for trade, $\frac{K}{2}$ weighted by 1970 observed retail prices.	
Tobacco	1.2	Retail sales	Retail sales deflated by the official price index for tobacco.	
Soft goods	20.8			
Cotton fabric	0.9	Retail sales	<p>Retail sales deflated by the official price index for cotton fabric, Retail sales deflated by the official price index for wool fabric. Retail sales deflated by the official price index for silk fabric. Retail sales deflated by a derived price index for linen fabric, $\frac{K}{1}$ Production, $\frac{K}{2}$ Production, $\frac{K}{2}$ Production adjusted for trade and inventory change, Production of under and outer knitwear weighted by their respective observed modal 1970 prices. Retail sales deflated by the official price index for haberdashery.</p>	
Wool fabric	0.6	Retail sales		
Silk fabric $\frac{K}{1}$	0.7	Retail sales		
Linen fabric	0.2	Retail sales		
Sewn goods	7.1	Retail sales		
Hosiery	0.8	Retail sales		
Leather shoes	3.2	Retail sales		
Knitwear	3.3	Retail sales		
Haberdashery	1.7	Retail sales		

Table 3

6/10/76

USSR: Structure of the Index of Consumption

Product	Type of Data Used to Derive:		Series
	1970 Weight	1970 Base Weight	
Household soaps $\frac{r}{l}$	0.3	Retail sales	Retail sales deflated by a derived price index for household soaps. $\frac{r}{l}$
Toilet soap $\frac{r}{l}$	0.6	Retail sales	Retail sales deflated by a derived price index for toilet soap. $\frac{r}{l}$
School supplies	0.5	Retail sales	Retail sales deflated by a derived price index for school supplies. $\frac{r}{l}$
Publications	0.9	Retail sales	Retail sales. $\frac{m}{l}$
Durables and other miscellaneous goods	6.4	$\frac{r}{l}$	$\frac{r}{l}$
Services $\frac{r}{l}$	11.9		
Trade union and Party membership dues	1.0	Expenditures $\frac{r}{l}$	Trade union and Party membership
Housing	1.6	Expenditures $\frac{r}{l}$	Housing stock.
Utilities	1.6	Expenditures $\frac{r}{l}$	Estimated use of heating, gas, and electricity.
Transportation	3.3	Expenditures $\frac{r}{l}$	Estimated expenditures on all forms of transportation. $\frac{r}{l}$
Communication	0.5	Expenditures $\frac{r}{l}$	Estimated expenditures on all forms of communication. $\frac{r}{l}$
Repair and personal care	2.1	Expenditures $\frac{r}{l}$	Officially reported purchases of services from the state sector $\frac{r}{l}$ and of estimated purchases from the private sector.
Recreation, art and physical culture	1.8	Expenditures $\frac{r}{l}$	Employment at hotels, movie admissions, and number of persons at rest homes.
Communal services	11.9		
Education	7.3	Expenditures $\frac{r}{l}$	
Wages	4.5		Man hours worked
Materials	2.8		Budget expenditures less investment and wages
Health	4.6	Expenditures $\frac{r}{l}$	
Wages	2.6		Man hours worked
Materials	2.0		Budget expenditures less investment and wages.

Footnotes to Table 3 *Appendix A*

- a. Cannot be adjusted for trade or inventory change because the necessary data are not published.
- b. Officially reported per capita consumption data could not be used because they include industrially used vegetable oil.
- c. Product does not enter USSR foreign trade.
- d. The assortment problem precludes adjustments for trade or inventory change.
- e. Quality adjustment is based on changes in production assortment.
- f. Sum of (1) retail sales of bread and bread products, flour and groats; (2) estimated military consumption of these products; (3) collective farm market sales of grain; and (4) estimated in-kind grain consumption.
- g. Assumed to be 90% of category, "other food goods, the share during those years prior to 1963 when data on sales of "alcoholic and non-alcoholic beverages" were published.
- h. Cannot be adjusted for inventory change because the necessary data are not published.
- i. Includes synthetic fabrics.
- j. Price index derived from data on sales in constant and in current prices.
- k. Includes synthetic soaps.
- l. Includes perfumery.
- m. Data on assortment and prices of published material, available for 1965, 1970-73, indicate the average weighted price has not changed significantly.
- n. See text of Appendix, p. , for brief explanation of the technique used to derive the base weight and series of this component.
- o. The series for each service is an index based on one or more types of data. When more than one type of data is used, either in index form or absolute, the segments are weighted together with their respective 1970 expenditures.
- p. CIA, A (ER) 75-76, USSR: Gross National Products Accounts, 1970, Washington, D.C., November 1975, p. 8.
- q. For example, number of subway rides at the 1970 price, number of streetcar rides, passenger - kilometers on planes, trains, ships and so on.
- r. For example, postal, urban and rural telephone, telegraph and so on.
- s. Excluding housing repair.

APPENDIX B

Estimate of Personal Disposable Money Income in the USSR

The following tables update the estimates of personal money income in the USSR that appeared in JEC 1973, p. 393. The format has been changed and the data have been disaggregated. Table 1 summarizes money incomes and deductions from incomes and derives real per capita disposable money income. Table 2 presents money income by source, and Table 3 sets out deductions from money income by type. Detailed sources and methodology accompany each table. The estimates for 1975 are preliminary and can be expected to change when more information becomes available.

Some of the earlier estimates have been revised on the basis of new data or changed methodology. The main revisions pertain to military pay and insurance indemnities and premiums. Several new items have been added, namely, trade union and Communist Party membership dues, interest on savings accounts, and lottery winnings. As a result of these changes, the new estimates for personal disposable money income for 1950-72 are smaller in most years by about 2 percent, as compared with estimates previously published..

While the new estimates present a more comprehensive picture of personal disposable money income, coverage is not complete. The total of missing income is believed to be small, amounting to roughly 7 percent in 1970 (see GNP, 1970, p. 3). Much of the missing income is thought to be derived from privately supplied services, a category that cannot be reliably estimated. In addition, income from the smaller lotteries -- DOSAAF (the Voluntary Society for Assisting the Army, Air Force and Navy), Sportloto, and so on -- is not included because of lack of data for years prior to 1971. Revenue from these lotteries amounted to 264 million rubles in 1975, about the same as that from the "money-goods" lottery (Finansy SSSR, no. 4, 1976, p. 25). Also missing are receipts from the sale of personal property, incomes from travel expense accounts, and miscellaneous money payments by enterprises not included in the wage fund.

On the deductions side, outlays for miscellaneous dues (paid to professional organizations, DOSAAF, sporting clubs, and the like) and those for compulsory insurance premiums are not included because of lack of data. Neither item is large. Miscellaneous dues are estimated to have amounted to 300 million rubles in 1970 (GNP, 1970, p. 41), about 15 percent of total dues paid. Premiums for compulsory insurance

paid by individuals have declined from 60 percent of total premiums paid for all forms of insurance in 1960 to 12 percent in 1974, when compulsory payments were about 500 million rubles (Finansy SSSR, no. 6, 1975, p. 59.)

In Table 1, per capita disposable money incomes are expressed in real terms with the use of two consumer price indexes: (1) an "official" index that combines the Soviet official index of state retail prices with an index of collective farm market prices based on officially published data; the two components are weighted with their respective shares in total retail and collective farm market sales in 1970; and (2) an "alternative" index of prices for consumer goods that is implicit in a comparison of an index of purchased goods in current prices with a similar index in constant prices. The current price index is based on the values of total retail and collective farm market sales in current prices regularly published in Soviet statistical handbooks. The index in constant prices is derived from the goods components (of the) index of total consumption given in Appendix A, Table 1. Specifically, an index of goods purchased in retail trade and collective farm markets is obtained by subtracting the value of consumption in-kind in each year from the total value of goods consumed, both values expressed in 1970 prices. The derivation of the index of consumption of goods is explained in Appendix A. Estimates of consumption in-kind in 1970 prices

were made by Constance B. Krueger for benchmark years (1950, 1955, 1960, 1966, 1970 and 1974), following the methodology described in GNP, 1970, pp. 26-38. Values for other years were derived by interpolation on the basis of the trend in the share of consumption in-kind in total consumption of food.

The nature and respective merits of the two price indexes are discussed in the text. The shortcomings of the Soviet official retail price indexes are well known. With respect to the "alternative" index, it is in no sense an independently calculated index based on observed prices. Rather, it is an implicit price index, and its accuracy depends on the accuracy of the measures of consumption in constant prices presented in this paper. Since the "alternative" price index is derived from largely independent sets of data, year-to-year changes are not necessarily accurate. The trend seems reasonable, however, and accords well with other evidence concerning changes in prices actually paid by consumers during the period investigated.

Table 1

USSR: Personal Disposable Money Income

		Billion Rubles													
		1950	1955	1960	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
1.	Total personal money income	46.64	64.26	85.14	123.43	134.42	144.77	160.05	170.20	182.98	194.53	206.70	219.37	234.94	247.89
2.	Deductions from personal money income	6.93	8.78	6.69	9.62	10.60	11.59	13.34	15.04	16.63	17.84	19.46	21.39	23.42	25.99
3.	Personal disposable money income	39.71	55.48	78.45	113.81	123.82	133.18	146.71	155.16	166.35	176.69	187.24	197.98	211.52	221.90
4.	Per capita personal disposable money income (rubles)	220.49	282.77	366.08	492.90	530.28	564.32	615.65	644.89	685.13	720.89	756.52	792.87	839.03	871.56
5.	Real per capita disposable money income (rubles) deflated by:														
	a) Soviet official price index	166.28	285.34	367.55	490.45	531.88	566.02	617.50	645.54	685.13	720.89	755.76	791.29	837.36	868.09
	b) "Alternative" implicit price index	219.61	337.84	418.86	526.04	560.55	584.79	625.04	653.38	685.13	715.17	721.87	763.84	795.29	804.02

Personal Disposable Money Income

Sources and Methodology

1. Total personal money income
 - a. All years - Table 2.
2. Deductions from personal money income
 - a. All years - Table 3.
3. Personal disposable money income
 - a. All years - Line 1. less line 2.
4. Per capita personal disposable money income
 - a. All years - Line 3. divided by mid-year population from U.S. Department of Commerce, Bureau of Economic Analysis, Foreign Demographic Division.
5. Real per capita disposable money income
 - a. Soviet Official Price Index
 1. 1950, 1955, 1960, 1965-74--Line 4, deflated by an index of prices paid by consumers for goods. The deflator is a weighted index based on the official retail price index from N.Kh. 1974, p. 653, and a collective farm market price index derived from N.Kh. 1974, p. 626. The weights are the respective shares of total sales in 1970 from N.Kh. 1974, p. 625.
 2. 1975 - estimated.
 - b. "Alternative" implicit price index
 1. All years - line 4, deflated by the "alternative" implicit price index (see Appendix B, text).

Table 2
USSR: Personal Money Income

5/11/73
Billion rubles

	1950	1955	1960	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
1. Total personal money income	46.64	64.26	85.14	123.43	134.42	144.77	160.05	170.20	182.98	194.53	206.70	219.37	234.94	247.89
2. Gross earnings of wage and salary workers	32.00	44.51	59.97	89.05	95.83	103.40	115.09	123.31	132.05	140.02	148.74	157.83	168.98	179.30
3. Wage payments to collective farm members	1.18	3.06	4.94	9.13	10.96	12.66	13.40	13.66	14.04	14.38	14.82	15.77	16.24	16.24
4. Net incomes of households from sale of farm products	4.18	4.11	5.39	6.39	7.15	6.84	7.35	6.90	8.26	8.97	9.39	9.59	9.70	9.50
5. Profits distributed to cooperative members	—	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.03	0.03
6. Military pay and money allowances	4.65	5.75	3.38	3.17	3.19	3.26	3.26	3.33	3.32	3.45	3.45	3.50	3.60	3.76
7. Transfer payments	3.99	5.36	10.39	15.01	16.55	17.71	19.93	21.80	24.04	26.28	28.70	30.90	33.47	35.88
8. Pensions and welfare payments	3.49	4.57	9.68	13.85	15.18	16.22	18.27	19.92	21.96	23.89	25.94	27.49	29.17	31.30
9. Pensions	2.40	3.20	7.20	10.60	11.80	12.60	14.00	15.00	16.20	18.00	19.80	20.80	22.10	24.30
10. Welfare payments	1.09	1.37	2.48	3.25	3.38	3.62	4.27	4.92	5.76	5.89	6.14	6.70	7.07	7.00
11. Temporary disability benefits	0.54	0.64	1.33	1.96	2.02	2.28	2.81	3.34	3.73	3.69	3.86	4.27	4.44	N.A.
12. Maternity benefits	0.18	0.24	0.51	0.62	0.65	0.66	0.72	0.79	0.87	0.94	0.99	1.04	1.19	N.A.
13. Grants to large families and unwed mothers	0.37	0.49	0.50	0.46	0.46	0.45	0.45	0.44	0.44	0.43	0.42	0.41	0.40	N.A.
14. Other grants	—	—	0.14	0.21	0.25	0.23	0.29	0.35	0.72	0.83	0.87	0.98	1.04	N.A.
15. Stipends to students	0.46	0.74	0.60	0.90	1.00	1.10	1.18	1.30	1.30	1.40	1.50	1.90	2.10	2.14
16. Insurance indemnities	0.04	0.05	0.11	0.26	0.37	0.39	0.48	0.58	0.78	0.99	1.26	1.51	2.20	2.44
17. Loan service	0.51	1.43	0.70	0.10	0.10	0.20	0.20	0.20	0.10	0.10	0.08	0.11	1.10	1.10
18. Net borrowing	0.07	-0.09	0.06	0.09	0.02	-0.04	-0.06	-0.04	-0.03	-0.03	-0.01	-0.03	-0.04	-0.04
19. Interest on savings	0.06	0.12	0.23	0.38	0.46	0.55	0.65	0.78	0.93	1.10	1.25	1.42	1.62	1.87
20. Lottery winnings	—	—	0.06	0.09	0.14	0.17	0.21	0.24	0.24	0.23	0.24	0.24	0.24	0.25

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Personal Money Income

Sources and Methodology

1. Total money income

- a. All years -- Sum of lines 2 through 7 and 17 through 20.

2. Gross earnings of wage and salary workers

- a. 1950, 1955--Narodnoye khozyaystvo SSSR v 1974 godu, Moscow, 1975, p. 549, 562 (hereafter, N. Kh. and the appropriate year). Includes gross earnings of cooperative artisans of .88 billion rubles in 1950 and 1.17 billion rubles in 1955 respectively. Cooperative artisans earned a wage equal to two-thirds that of industrial wage and salary workers according to US Bureau of the Census, Producers' Cooperatives in the Soviet Union, by Frederick A. Leedy, International Population Reports Series, P 95, no. 51, Washington, D.C., p. 14. The average annual number of artisans is reported in N. Kh. 1964, p. 545. The average annual industrial earnings are from Trud v SSSR, Moscow, 1968, p. 140. Producers' cooperatives were converted into state enterprises in 1960 and members were then classified as state workers.
- b. 1960, 1965-74-- N. Kh. 1974, p. 549, 562. Gross earnings are the product of the average annual number of wage and salary workers and the average monthly earnings, adjusted to an annual basis. In 1968, the USSR Central Statistical Administration (hereafter CSA) changed the reporting of average wages to include bonuses from non-wage fund sources. Estimates in this table have been adjusted accordingly.
- c. 1975 -- Sel'skaya zhizn, 1 February 1976, p. 1.

3. Wage payments to collective farm members

- a. 1950, 1955, 1960 -- David W. Bronson and Constance B. Krueger, "The Revolution in Soviet Farm Household Income, 1953-1967," in James R. Millar (ed.), The Soviet Rural Community, University of Illinois Press, Urbana, 1971, p. 250.
- b. 1965- 74 -- Derived for each year as the product of (1) official statistical handbook data regarding total wage payments (money plus in-kind) made by collective farms to collective farm members for their work in socialized activity of the farms and (2) the share constituting money payments only. Data for total wage payments (money plus in-kind) are available for 1965-70 in Sel'skoye khozyaystvo SSSR, Moscow, 1971, p. 479; for 1971-74 in N.Kh. 1974, p. 422; for 1975, in SSSR v tsifrakh v 1975 godu (hereafter Tsifrakh p. 135. Money payments accounted for 79.4% of total payments (money plus in-kind) in 1965 (V.N. Zhurikov and V.I. Solomakhin, compilers, Spravochnik po oplate truda v kolkhozakh, Moscow, 1973, p. 10); 85.6% in 1966; 92.4% in 1967; 93.7% in 1968; 96.9% in 1969 (S.V. Rogachev, Ekonomicheskiye zakony i razvitiye sel'skogo khozyaystva, Moscow, 1973, p. 217); and 93.6% in 1970 (Zhurikov and Solomakhin, op. cit.). Money payments are estimated to amount to 94% in 1971, in line with the 1970 share, and to 95% in 1972 through 1974.

4. Net income of households from sales of farm products

Net income of households from sales of farm products is derived as the difference between (1) total money income of households from sales of farm products -- sales to state procurement and state and cooperative trade organizations, sales in collective farm ex-village markets and commission trade, and sales of livestock to collective farms -- and (2) money outlays -- purchases from outside the sector of materials and services used in production of these agricultural products and indirect taxes. Included in indirect taxes are

fees charged collective farm market traders and taxes levied on livestock holdings of households.

- a. All years -- Unpublished estimates of Constance B. Krueger, Central Intelligence Agency.

5. Profits distributed to cooperative members

Consumers' cooperatives constitute a separate trade network, paralleling that of the state stores but designed primarily to service rural areas with stores and restaurants. A cooperative is usually composed of residents of a single village. Nominally, the cooperatives system is controlled by its members, but the government actually exercises strict control over profits, prices, and earnings. A small share of profits is distributed to members. During 1962-65, 68.4 million rubles were distributed to cooperative members according to A.P. Ilyushin (ed.), 50 let sovetskoy potrebitel'skoy kooperatsii, Moscow, 1967, p. 142. Total cooperative profits for those years were 3,389 million rubles. (N. Kh. 1963, p. 637 and N. Kh. 1964, p. 747.) Dividing distributions by profits, results in a distribution rate of 2.02 percent. This rate is applied to reported profits for each year.

- a. 1950, 1960, 1965-67 -- N. Kh. 1967, p. 857.
- b. 1955 -- N. Kh. 1960, p. 843.
- c. 1970-74 -- N. Kh. 1974, p. 739.
- d. 1975 - Assumed equal to 1974.

6. Military pay and monetary allowances

The USSR publishes no data on aggregate military pay. An estimate of total pay for 1970 was recently published by CIA. This is used as a base weight and is moved from 1950 to the current year by an index based on military manpower, including paramilitary personnel such as border guards and security forces.

- a. 1970 -- GNP 1970, p. 3.
- b. All other years -- Index based on military manpower estimates from the annual publication of the International Institute for Strategic Studies, The Military Balance, London.

7. Transfer payments

- a. All years -- Sum of lines 8, 15 and 16.

8. Pensions and welfare payments

The Soviet Union has established an extensive program of social services covering a wide range of contingencies. The state social security program -- which includes benefits for sickness, maternity, and large families, and pensions for old age and disability -- covers workers in state enterprises. Since 1965, a similar but more limited program has existed for collective farmers. Pensions and welfare payments are derived as the difference between total outlays for social security and social insurance, including pensions, and the sum of outlays for health resorts and sanatoria, outlays for kindergartens and pioneer camps, and miscellaneous outlays.

- a. 1950, 1968-69 -- N. Kh. 1969, p. 771, 774. In 1950, the sum of reported welfare payments (lines 11 through 14) exceeds total welfare payments derived by subtracting reported pension payments from reported total pension and welfare payments by 120 million rubles. Therefore total welfare payments and, consequently, pension and welfare payments have been adjusted upward by that amount.
- b. 1955 -- N. Kh. 1958, p. 905-906, adjusted, assuming relationship between expenditures in 1950 as reported in N. Kh. 1958, p. 905-906, and in N. Kh. 1969, p. 771, 774, applied in 1955. Welfare payments and, consequently, pension and welfare payments adjusted upward by 150 million rubles, as in 1950 above.
- c. 1960, 1966-67 -- N. Kh. 1968, p. 776, 779.
- d. 1965, 1970-74 -- N. Kh. 1974, p. 758, 760.
- e. Finansy SSSR, no. 1, 1976, p. 14.

9. Pensions

State workers and collective farmers are given pensions for permanent disability, survivor, old-age, and long service.

- a. 1950, 1968-69 -- N. Kh. 1969, p. 758.
- b. 1955 -- Estimated to be 72 percent of pensions and welfare payments, based on the relationships existing in 1950 and 1960.
- c. 1960, 1966-67 -- N. Kh. 1968, p. 776.
- d. 1965, 1970-74 -- N. Kh. 1974, p. 758.
- e. 1975 - Finansy SSSR, no. 1, 1976, p.14.

10. Welfare payments

- a. Total pension and welfare payments (line 8) less pensions (line 9).

11. Temporary disability benefits

Sickness and injury benefits are payable from the day of the disablement until recovery or until a medical commission certifies that the patient is incurable and should receive a pension for permanent disability. Since 1957, all state workers have been eligible to receive 100 percent of their earnings for temporary disability resulting from work-connected injury or from any one of 22 designated occupation illnesses.

- a. 1950, 1965, 1970-74 -- N. Kh. 1974, p. 760.
- b. 1955 -- N. Kh. 1958, p. 906.
- c. 1960, 1968-69 -- N. Kh. 1969, p. 774.
- d. 1966-67 -- N. Kh. 1967, p. 779.

12. Maternity benefits

Paid maternity leave was lengthened from 77 to 112 days in 1956. Payments are based on earnings and length of employment, ranging from 66 2/3 percent if employed for less than one year to full compensation is employed for three years or more.

- a. All years -- Sources to line 11, above.

13. Grants to large families and unwed mothers

- a. 1950, 1955, 1960 -- Gosudarstvennyy byudzhety SSSR i byudzhety soyuznykh respublik, Moscow, 1966, p. 25.

b. 1965-69 -- Gosudarstvennyy byudzhety SSSR i byudzhety soyuznykh respublik 1966-1970 gg., Moscow, 1972, p. 25.

c. 1970-74 -- N. Kh. 1974, p. 759.

14. Other grants

Includes payments for retraining state workers and burial payments for state workers and their families. Total welfare payments (line 10) less temporary disability benefits (line 11), maternity benefits (line 12), and grants to large families and unwed mothers (line 13).

15. Stipends to students

a. 1950,¹⁹⁵⁵ -- Raskhody na sotsial'no-kul'turnye meropriyatiya po gosudarstvennomu byudzhetu SSSR, Moscow, 1958, p. 46.

b. 1960,¹⁹⁶⁹⁻⁷⁰ -- N. Kh. 1970, p. 537.

c. 1965, 1970-74 -- N. Kh. 1974, p. 578.

d. 1966-68 -- Estimates based on numbers of students in higher education (N. Kh. 1968, p. 682, and N. Kh. 1969, p. 675) and average stipend paid in 1965 and 1969.

e. 1975 - Estimate based on increase in numbers of students in higher education (Tsifrakh 1975, p. 219).

16. Insurance indemnities

Sum of compensation received for personal property and life and accident insurance claims.

a. 1950,¹⁹⁵⁵ -- N. Laptev (ed.), Finansy i sotsialisticheskoye stroitel'stvo, Moscow, 1957, p. 355-56.

b. 1960 -- A.G. Zverev, Natsional'nyy dokhod i finansy SSSR, Moscow, 1961, p. 258.

c. 1965-66 -- G.P. Kosyachenko, et al, 50 let sovetskikh finansov, Moscow, 1967, p. 347-48.

d. 1967-68 -- A.G. Zverev, Natsional'nyy dokhod i finansy SSSR, Moscow, 1970, p. 282.

e. 1969 -- Ekonomicheskaya gazeta, no. 41, 1971, p. 6.

- f. 1970 -- Finansy SSSR, no. 1, 1971, p. 10.
 - g. 1971-72 -- Based on Ekonomicheskaya gazeta, no. 41, 1971, p. 6, and Finansy SSSR, no. 4, 1973, p. 8.
 - h. 1973 -- Finansy SSSR, no. 4, 1974, p. 14.
 - i. 1974 -- Finansy SSSR, no. 6, 1975, p. 59.
 - j. 1975 -- Finansy SSSR, no. 5, 1976, p. 17.
17. Loan service

- a. 1950,¹⁹⁵⁵ -- N. Kh. 1958, p. 900.
- b. 1960,¹⁹⁶⁵⁻⁶⁸ -- N. Kh. 1968, p. 774.
- c. 1969-70 -- N. Kh. 1970, p. 730.
- d. 1971 -- N. Kh. 1972-72, p. 482.

Since 1971, budget reporting has carried no item on loan service. Estimates for 1972 forward are based on the following:

- e. 1972-73 -- Den'gi i kredit, no. 1, 1974, p. 4. In 1972 and 1973, 2.6 billion rubles and 3.6 billion rubles of 3 percent lottery bonds were sold respectively.
- f. 1974-75 -- Den'gi i kredit, no. 11, 1974, p. 90. The government resumed redemption of the subscription loans in December 1974. In 1974 and in 1975 1 billion rubles were to be paid to the population. Total loan service for each year also includes an estimated 0.1 billion rubles of payment for 3 percent lottery loans. Finansy SSSR, no. 4, 1976, p. 24, confirms that in 1974-75, 2 billion rubles of loans were paid off.

18. Net borrowing

The difference between long-term loans to the population outstanding at the end of the given year and loans outstanding at the end of the previous year.

- a. 1950,¹⁹⁵⁵ -- Vestnik statistiki, no. 2, 1960, p. 89-92.
- b. 1960 -- N. Kh. 1962, p. 639.
- c. 1966-68 -- N. Kh. 1968, p. 779.
- d. 1969 -- N. Kh. 1969, p. 774.

e. 1970 -- N. Kh. 1970, p. 735.

f. 1971-74 -- N. Kh. 1974, p. 761.

19. Interest on savings

State savings banks offer the following major types of accounts for individuals:

- 1) demand (vkłady do vostrebovaniya) paying 2 percent yearly interest;
- 2) time (srochnyye vkłady) paying 3 percent yearly when held for more than 6 months;
- 3) lottery deposit (vyigryshnyye vkłady) paying an average of 3 percent yearly in winnings. (A.P. Sakharov and V.K. Chirkov, Operatsii sberegatel'nykh kass, Moscow, 1973, p. 21-23.)

For all years, except 1950, interest payments are assumed to be 2.2 percent of average annual reported deposits, based on Vestnik statistiki, no. 1, 1967, p. 22, which stated that interest on savings amounted to 383 million rubles in 1965 -- 2.2 percent of average annual deposits in that year. Long-term deposits make up the bulk of savings accounts, amounting to 73.1 percent in 1971 according to Den'gi i kredit, no. 8, 1971, p. 68. The same article stated that no significant changes occurred in the distribution of deposits by category during 1965-70. In 1975, the proportions remained about the same; approximately 70% of savings deposits were in long-term accounts.

For 1950, however, interest payments are assumed to equal 3 percent of total deposits because, according to Vestnik statistiki, no. 1, 1967, p. 22, interest payments were lowered from 3-5 percent to 2-3 percent in 1955.

a. 1950, 1968-69 -- N. Kh. 1969, p. 585.

b. 1955 -- N. Kh. 1960, p. 854.

c. 1960, 1966-67 -- N. Kh. 1967, p. 699.

d. 1965, 1970-74 -- N. Kh. 1974, p. 607.

e. 1975 -- Sel'skaya zhizn, 1 February 1976, p. 2.

*according to Finansy ^{SSSR}, no. 4, 1976, p. 23.

20. Lottery winnings

A cash-or-commodity lottery was begun in 1957 with winnings set at 50 percent of total lottery revenues (G. Yeremeyev, et al., Osnovy sberegatel'nogo dela, Moscow, 1965, p. 50). In 1966, winnings were increased to 60 percent of revenues (Den'gi i kredit, no. 4, 1966, p. 9) and by 1968, 95 percent of lottery winnings were in the form of money (Den'gi i kredit, no. 8, 1970, p. 69). Since 1968, it is assumed that money winnings were 95 percent of reported lottery revenues. Winnings from other lotteries are not included.

- a. 1960 -- Gosudarstvennyy byudzheth SSSR i byudzhety soyuznykh respublik, Moscow, 1966, p. 11.
- b. 1965-70 -- Gosudarstvennyy byudzheth SSSR i byudzhety soyuznykh respublik 1966-70, Moscow, 1972, p. 12.
- c. 1971-75 -- Finansy SSSR, no. 4, 1976, p. 24.

5/13/76

Table 3

USSR: Deductions from Personal Money Income

	1950	1955	1960	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
1. Total deductions	6.93	8.78	6.69	9.62	10.60	11.59	13.34	15.04	16.63	17.84	19.46	21.39	23.42	25.99
2. Direct taxes	3.58	4.83	5.60	7.70	8.44	9.32	10.50	11.60	12.74	13.70	14.80	15.80	17.10	18.40
3. Personal income tax	2.04	3.55	4.64	6.77	7.50	8.36	9.50	10.54	11.61	12.47	13.47	14.38	15.56	16.74
4. Agricultural tax	0.80	0.44	0.40	0.36	0.35	0.35	0.34	0.33	0.33	0.33	0.33	0.33	0.33	0.33
5. Bachelor & small family tax	0.74	0.84	0.56	0.57	0.59	0.62	0.66	0.73	0.80	0.90	1.00	1.09	1.21	1.33
6. Local taxes	0.28	0.29	0.14	0.17	0.19	0.19	0.20	0.19	0.18	0.18	0.18	0.18	0.18	0.18
7. State fees	0.03	0.04	0.04	0.05	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
8. Building tax & land rent	0.13	0.17	0.07	0.09	0.09	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11
9. One-time collections at collective farm markets	0.04	0.02	0.02	0.02	0.02	0.02	0.02	0.02	--	--	--	--	--	--
10. Collections on transportation & livestock in cities	0.08	0.06	0.01	0.01	0.02	0.01	0.01	--	--	--	--	--	--	--
11. State loans	2.70	3.14	0.06	0.18	0.22	0.13	0.28	0.36	0.47	0.20	0.20	0.20	0.20	0.56
12. Trade union dues	0.24	0.36	0.55	0.86	0.96	1.08	1.20	1.28	1.38	1.45	1.54	1.63	1.75	1.85
13. Party membership dues	0.10	0.12	0.17	0.28	0.30	0.31	0.36	0.39	0.42	0.44	0.46	0.48	0.51	0.54
14. Insurance premiums	0.03	0.04	0.17	0.43	0.49	0.56	0.80	1.22	1.44	1.87	2.28	3.10	3.68	4.46

Billion Rubles

14 May 1976

Deductions from Personal Income

Sources and Methodology

1. Total deductions
 - a. All years -- Sum of lines 2, 6, 11, 12, 13, 14.
2. Direct taxes
 - a. 1950, 1955, 1960 -- Gosudarstvennyy byudzhets SSSR i byudzhety soyuznykh respublik, Moscow, 1966, (hereafter Gos. byud., 1966), p. 11.
 - b. 1965-1970 -- Gosudarstvennyy byudzhets SSSR i byudzhety soyuznykh respublik, 1966-70 gg., (hereafter Gos. byud., 1972) Moscow, 1972, p. 12.
 - c. 1970-1974 -- N.Kh. 1974, p. 756.
 - d. 1975 - Tsifrakh 1975, p. 43.
3. Personal income tax
 - a. 1950, 1955, 1960, 1965-70 -- Sources a. and b. of 2. above.
 - b. 1971-75 -- Assumed 91 percent of direct taxes (line 2. above), average rate for 1966-70.
4. Agricultural tax
 - a. 1950, 1955, 1960, 1965-70 -- Sources a. and b. of 2. above.
 - b. 1971-75 -- Assumed constant at 1970 level.
5. Bachelor and small family tax
 - a. 1950, 1955, 1960, 1965-70 -- Sources a. and b. of 2. above.
 - b. 1971-75 -- Line 2 less lines 3 and 4.

6. Local taxes

It is assumed that half of local taxes paid for state fees, building taxes and land rents, and one-time collections at collective farm markets are paid by individuals. In addition local taxes include an "admission tax" paid solely by institutions (US Bureau of the Census, The Soviet Financial System: Structure, Operation, and Statistics, Washington, 1968, p. 127-28).

- a. 1950, 1955, 1960 -- Gos. byud., 1972, p. 77, reduced by value of "admissions tax" from Gos. byud., 1966, p. 70, and half the value of taxes paid on the three categories listed below.
- b. 1965-70 -- Gos byud., 1972, p. 76, reduced by value of "admission tax" from Mestnyye byudzhety SSSR, Moscow, 1970, p. 11. "Admission taxes" assumed to grow by 3% during 1969-70, the rough average annual rate during 1960-68.
- c. 1971-1975 -- Assumed constant at 1970 level.

7. State fees

It is assumed that one-half of state fees are paid by individuals.

- a. 1950, 1955, 1960 -- Gos. byud. 1966, p. 70.
- b. 1965-1970 -- Gos. byud., 1972, p. 77.
- c. 1971-1975 -- Assumed constant at 1970 level.

8. Building tax and land rent

It is assumed that one-half of building taxes and land rents are paid by individuals.

- a. 1950, 1955, 1960, 1965-70 -- Sources a. and b. of 2. above.
- b. 1971-75 -- Assumed constant at 1970 level.

9. One-time collections at collective farm markets

- a. 1950, 1955, 1960, 1965-69 -- Sources a. and b. of 2. above.

- b. 1970 -- Value too small to be reported (source b. of 2. above).
 - c. 1971-75 -- Assumed continued too small to be reported.
10. Collections on transportation and on livestock holdings in cities
- a. Line 6 less lines 7, 8, and 9.
11. State loans
- a. 1950, 1955, 1960 -- Gos. byud., 1966, p. 11. Includes compulsory bond purchases of 2.6 billion rubles in 1950 and 3.0 billion rubles in 1955.
 - b. 1965-70 -- Gos. byud., 1972, p. 12.
 - c. 1971-74 -- N. Kh. 1974, p. 757.
 - d. 1975 -- Finansy SSSR, no. 4, 1976, p. 24.
12. Trade union dues

Trade union dues are the product of estimated trade union membership and 1 percent of the average annual wage. The rate is found in Spravochnik profsoyuznogo rabotnika, 1972, Moscow, 1972, p. 463. The average annual wage is derived by adjusting the average monthly wage, found in N.Kh. 1974, p. 562, and Tsifrakh 1975, p. 179, to an annual basis. Data on trade union membership are scattered, but available for several years. Membership is established for 1949, 1954, 1959, and 1963 in Emily C. Brown, Soviet Trade Unions and Labor Relations, Harvard, 1966, p. 48. Membership for 1967 and 1971 is given in Sovetskoye profsoyuzy, no. 5, 1972, p. 6. Membership for the remaining years is estimated on the basis of percentage of state labor force belonging to the trade unions or by percentage increases in the state labor force. State labor force data are found in N.Kh. 1974, p. 549 and Tsifrakh 1975, p. 173.

13. Party membership dues

Party membership dues are the product of average annual party membership and 2 percent of the average annual wage. The rate is from GNP 1970, p. 40. The average annual wage is derived by adjusting the average monthly wage, found in N. Kh. 1974, p. 562, and Sel'skaya zhizn', 1 February 1976, p. 2, to an annual basis. Party membership is from Partiinaya zhizn', no. 14, July 1973, p. 10, Kommunist, no. 5, March, 1975, p. 11, and Sel'skaya zhizn', 25 February 1976, p. 6.

14. Insurance premiums

- a. 1950, 1955 -- Estimate based on relationship of total value of annual voluntary property insurance and life insurance in 1950, 1955, and 1960, from N. Laptev, ed., Finansy i sotsialisticheskoye stroitel'stvo, Moscow, 1957, p. 355-56, and A. G. Zverev, Natsional'nyy dokhod i finansy SSSR, Moscow, 1961, p. 258, to voluntary life insurance payments in 1960 (b. below).
- b. 1960, 1965 -- Finansy, SSSR, no. 4, 1972, p. 3.
- c. 1966 -- Interpolated.
- d. 1967, 1972 -- Finansy SSSR, no. 1, 1973, p. 57.
- e. 1968 -- Finansy SSSR, no. 12, 1968, p. 7.
- f. 1969 -- Estimate based on Finansy, SSSR, no. 4, 1974, p. 16. Premiums paid during the Eighth Five Year Plan were 4,515.08 mr.
- g. 1970, 1974 -- Finansy SSSR, no. 6, 1975, p. 59.
- h. 1971 -- Interpolated.
- i. 1973 -- Finansy SSSR, no. 4, 1974, p. 14.
- j. 1975 -- Estimate based on Finansy SSSR, no. 4, 1974, p. 16. Premiums paid during the Ninth Five Year Plan will be 15,391.2 mr.